


STATE OF UTAH DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS AND MINING					FORM 3 AMENDED REPORT <input checked="" type="checkbox"/>	
<b>APPLICATION FOR PERMIT TO DRILL</b>				<b>1. WELL NAME and NUMBER</b> NBU 921-2504BS		
<b>2. TYPE OF WORK</b> DRILL NEW WELL <input checked="" type="checkbox"/> REENTER P&A WELL <input type="checkbox"/> DEEPEN WELL <input type="checkbox"/>				<b>3. FIELD OR WILDCAT</b> NATURAL BUTTES		
<b>4. TYPE OF WELL</b> Gas Well Coalbed Methane Well: NO				<b>5. UNIT or COMMUNITIZATION AGREEMENT NAME</b> NATURAL BUTTES		
<b>6. NAME OF OPERATOR</b> KERR-MCGEE OIL & GAS ONSHORE, L.P.				<b>7. OPERATOR PHONE</b> 720 929-6007		
<b>8. ADDRESS OF OPERATOR</b> P.O. Box 173779, Denver, CO, 80217				<b>9. OPERATOR E-MAIL</b> Kathy.SchneebeckDulnoan@anadarko.com		
<b>10. MINERAL LEASE NUMBER (FEDERAL, INDIAN, OR STATE)</b> UO 4139 ST		<b>11. MINERAL OWNERSHIP</b> FEDERAL <input type="checkbox"/> INDIAN <input type="checkbox"/> STATE <input checked="" type="checkbox"/> FEE <input type="checkbox"/>		<b>12. SURFACE OWNERSHIP</b> FEDERAL <input type="checkbox"/> INDIAN <input type="checkbox"/> STATE <input checked="" type="checkbox"/> FEE <input type="checkbox"/>		
<b>13. NAME OF SURFACE OWNER (if box 12 = 'fee')</b>				<b>14. SURFACE OWNER PHONE (if box 12 = 'fee')</b>		
<b>15. ADDRESS OF SURFACE OWNER (if box 12 = 'fee')</b>				<b>16. SURFACE OWNER E-MAIL (if box 12 = 'fee')</b>		
<b>17. INDIAN ALLOTTEE OR TRIBE NAME (if box 12 = 'INDIAN')</b>		<b>18. INTEND TO COMMINGLE PRODUCTION FROM MULTIPLE FORMATIONS</b> YES <input checked="" type="checkbox"/> (Submit Commingling Application) NO <input type="checkbox"/>		<b>19. SLANT</b> VERTICAL <input type="checkbox"/> DIRECTIONAL <input checked="" type="checkbox"/> HORIZONTAL <input type="checkbox"/>		
<b>20. LOCATION OF WELL</b>	<b>FOOTAGES</b>	<b>QTR-QTR</b>	<b>SECTION</b>	<b>TOWNSHIP</b>	<b>RANGE</b>	<b>MERIDIAN</b>
<b>LOCATION AT SURFACE</b>	1156 FSL 2595 FWL	SESW	25	9.0 S	21.0 E	S
<b>Top of Uppermost Producing Zone</b>	485 FSL 1741 FEL	SWSE	25	9.0 S	21.0 E	S
<b>At Total Depth</b>	485 FSL 1741 FEL	SWSE	25	9.0 S	21.0 E	S
<b>21. COUNTY</b> UINTAH		<b>22. DISTANCE TO NEAREST LEASE LINE (Feet)</b> 485		<b>23. NUMBER OF ACRES IN DRILLING UNIT</b> 40		
		<b>25. DISTANCE TO NEAREST WELL IN SAME POOL (Applied For Drilling or Completed)</b> 444		<b>26. PROPOSED DEPTH</b> MD: 9700 TVD: 9516		
<b>27. ELEVATION - GROUND LEVEL</b> 4956		<b>28. BOND NUMBER</b> 22013542		<b>29. SOURCE OF DRILLING WATER / WATER RIGHTS APPROVAL NUMBER IF APPLICABLE</b> Permit #43-8496		
<b>ATTACHMENTS</b>						
<b>VERIFY THE FOLLOWING ARE ATTACHED IN ACCORDANCE WITH THE UTAH OIL AND GAS CONSERVATION GENERAL RULES</b>						
<input checked="" type="checkbox"/> WELL PLAT OR MAP PREPARED BY LICENSED SURVEYOR OR ENGINEER			<input checked="" type="checkbox"/> COMPLETE DRILLING PLAN			
<input type="checkbox"/> AFFIDAVIT OF STATUS OF SURFACE OWNER AGREEMENT (IF FEE SURFACE)			<input type="checkbox"/> FORM 5. IF OPERATOR IS OTHER THAN THE LEASE OWNER			
<input checked="" type="checkbox"/> DIRECTIONAL SURVEY PLAN (IF DIRECTIONALLY OR HORIZONTALLY DRILLED)			<input checked="" type="checkbox"/> TOPOGRAPHICAL MAP			
<b>NAME</b> Danielle Piernot		<b>TITLE</b> Regulatory Analyst		<b>PHONE</b> 720 929-6156		
<b>SIGNATURE</b>		<b>DATE</b> 08/13/2010		<b>EMAIL</b> gnbregulatory@anadarko.com		
<b>API NUMBER ASSIGNED</b> 43047512640000		<b>APPROVAL</b>  Permit Manager				

Proposed Hole, Casing, and Cement						
String	Hole Size	Casing Size	Top (MD)	Bottom (MD)		
Prod	7.875	4.5	0	9700		
Pipe	Grade	Length	Weight			
	Grade I-80 Buttress	9700	11.6			

Proposed Hole, Casing, and Cement						
String	Hole Size	Casing Size	Top (MD)	Bottom (MD)		
Surf	11	8.625	0	2300		
Pipe	Grade	Length	Weight			
	Grade I-80 LT&C	2300	28.0			

**NBU 921-25O4BS**

Pad: NBU 921-25N

Surface: 1,156' FSL 2,595' FWL (SE/4SW/4)

BHL: 485' FSL 1,741' FEL (SW/4SE/4)

Section 25 T9S R21E

Uintah County, Utah

Mineral Lease: UO 4139 ST

**ONSHORE ORDER NO. 1**

***DRILLING PROGRAM***

1. – 2. **Estimated Tops of Important Geologic Markers:**  
**Estimated Depths of Anticipated Water, Oil, Gas, or Mineral Formations:**

<u>Formation</u>	<u>Depth</u>	<u>Resource</u>
Uinta	0 – Surface	
Green River	1,370'	
Birds Nest	1,669'	Water
Mahogany	2,045'	Water
Wasatch	4,626'	Gas
Mesaverde	7,303'	Gas
MVU2	8,210'	Gas
MVL1	8,769'	Gas
TVD	9,516'	
TD	9,700'	

3. **Pressure Control Equipment** (Schematic Attached)

*Please refer to the attached Drilling Program.*

4. **Proposed Casing & Cementing Program:**

*Please refer to the attached Drilling Program.*

5. **Drilling Fluids Program:**

*Please refer to the attached Drilling Program.*

6. **Evaluation Program:**

*Please refer to the attached Drilling Program.*



**7. Abnormal Conditions:**

Maximum anticipated bottomhole pressure calculated at 9,516' TVD, approximately equals 6,027 psi (calculated at 0.63 psi/foot).

Maximum anticipated surface pressure equals approximately 3,934 psi (bottomhole pressure minus the pressure of a partially evacuated hole calculated at 0.22 psi/foot).

**8. Anticipated Starting Dates:**

*Drilling is planned to commence immediately upon approval of this application.*

**9. Variances:**

*Please refer to the attached Drilling Program.*

*Onshore Order #2 – Air Drilling Variance*

*Kerr-McGee Oil & Gas Onshore LP (KMG) respectfully requests a variance to several requirements associated with air drilling outlined in Onshore Order 2*

- *Blowout Prevention Equipment (BOPE) requirements;*
- *Mud program requirements; and*
- *Special drilling operation (surface equipment placement) requirements associated with air drilling.*

*This Standard Operating Practices addendum provides supporting information as to why KMG current air drilling practices for constructing the surface casing hole should be granted a variance to Onshore Order 2 air drilling requirements.*

*The reader should note that the air rig is used only to construct a stable surface casing hole through a historically difficult lost circulation zone. A conventional rotary rig follows the air rig, and is used to drill and construct the majority of the wellbore.*

*More notable, KMG has used the air rig layout and procedures outlined below to drill the surface casing hole in approximately 675 wells without incident of blow out or loss of life.*

***Background***

*In a typical well, KMG utilizes an air rig for drilling the surface casing hole, an interval from the surface to surface casing depths, which varies in depth from 1,700 to 2,800 feet. The air rig drilling operation does not drill through productive or over pressured formations in KMG field, but does penetrate the Uinta and Green River Formations. The purpose of the air drilling operation is to overcome the severe loss circulation zone in the Green River known as the Bird's Nest while creating a stable hole for the surface casing. The surface casing hole is generally drilled to approximately 500 feet below the Bird's Nest.*

*Before the surface air rig is mobilized, a rathole rig is utilized to set and cement conductor pipe through a competent surface formation. Generally, the conductor is set at 40 feet. In some cases, conductor may be set deeper in areas that the surface formation is not found competent. This rig also drills the rat and mouse holes in preparation for the surface casing and production string drilling operations.*

*The air rig is then mobilized to drill the surface casing hole by drilling a 12-1/4 inch hole to just above the Bird's Nest interval with an air hammer. The hammer is then tripped and replaced with a 12-1/4 inch tri-cone bit. The tri-cone bit is used to drill to the surface casing point, approximately 500 feet below the loss circulation zone (Bird's Nest). The 9-5/8 inch surface casing is then run and cemented in place, thereby isolating the lost circulation zone.*

*KMG fully appreciates Onshore Order 2 well control and safety requirements associated with a typical air drilling operations. However, the requirements of Onshore Order 2 are excessive with respect to the air rig layout and drilling operation procedures that are currently in practice to drill and control the surface casing hole in KMG Fields.*

#### ***Variance for BOPE Requirements***

*The air rig operation utilizes a properly lubricated and maintained air bowl diverter system which diverts the drilling returns to a six-inch blooie line. The air bowl is the only piece of BOPE equipment which is installed during drilling operations and is sufficient to contain the air returns associated with this drilling operation. As was discussed earlier, the drilling of the surface hole does not encounter any over pressured or productive zones, and as a result standard BOPE equipment should not be required. In addition, standard drilling practices do not support the use of BOPE on 40 feet of conductor pipe.*

#### ***Variance for Mud Material Requirements***

*Onshore Order 2 also states that sufficient quantities of mud materials shall be maintained or readily accessible for the purpose of assuring adequate well control. Once again, the surface hole drilling operations does not encounter over pressured or productive intervals, and as a result there is not a need to control pressure in the surface hole with a mud system. Instead of mud, the air rigs utilize water from the reserve pit for well control, if necessary. A skid pump which is located near the reserve pit (see attachment) will supply the water to the well bore.*

#### ***Variance for Special Drilling Operation (surface equipment placement) Requirements***

*Onshore Order 2 requires specific safety distances or setbacks for the placement of associated standard air drilling equipment, wellbore, and reserve pits. The air rigs used to drill the surface holes are not typical of an air rig used to drill a producing hole in other parts of the US. These are smaller in nature and designed to fit a KMG location. The typical air rig layout for drilling surface hole in the field is attached.*

*Typically the blooie line discharge point is required to be 100 feet from the well bore. In the case of a KMG well, the reserve pit is only 45 feet from the rig and is used for the drill cuttings. The blooie line, which transports the drill cuttings from the well to the reserve pit, subsequently discharges only 45 feet from the well bore.*

*Typically the air rig compressors are required to be located in the opposite direction from the blooie line and a minimum of 100 feet from the well bore. At the KMG locations, the air rig compressors are approximately 40 feet from the well bore and approximately 60 feet from the blooie line discharge due to the unique air rig design. The air compressors (see attachment) are located on the rig (1250 cfm) and on a standby trailer (1170 cfm). A booster sits between the two compressors and boosts the output from 350 psi to 2000 psi. The design does put the booster and standby compressor opposite from the blooie line.*

*Lastly, Onshore Order 2 addresses the need for an automatic igniter or continuous pilot light on the blooie line. The air rig does not utilize an igniter as the surface hole drilling operation does not encounter productive formations.*

***Conclusion***

*The air rig operating procedures and the attached air rig layout have effectively maintained well control while drilling the surface holes in KMG Fields. KMG respectfully requests a variance from Onshore Order 2 with respect to air drilling well control requirements as discussed above.*

**10. Other Information:**

*Please refer to the attached Drilling Program.*

COMPANY NAME	KERR-McGEE OIL & GAS ONSHORE LP				DATE	August 12, 2010	
WELL NAME	NBU 921-2504BS				TD	9,516'	9,700' MD
FIELD	Natural Buttes	COUNTY	Uintah	STATE	Utah	FINISHED ELEVATION	4,955'
SURFACE LOCATION	SE/4 SW/4	1,156' FSL	2,595' FWL	Sec 25	T 9S	R 21E	
	Latitude:	40.002947	Longitude:	-109.499545		NAD 27	
BTM HOLE LOCATION	SW/4 SE/4	485' FSL	1,741' FEL	Sec 25	T 9S	R 21E	
	Latitude:	40.001103	Longitude:	-109.496175		NAD 27	
OBJECTIVE ZONE(S)	Wasatch/Mesaverde						
ADDITIONAL INFO	Regulatory Agencies: UDOGM (Minerals), UDOGM (Surface), UDOGM Tri-County Health Dept.						

NBU 921-2504BS Drilling Progam Directional Well-updated 073010



## KERR-McGEE OIL & GAS ONSHORE LP

### DRILLING PROGRAM

#### CASING PROGRAM

	SIZE	INTERVAL	WT.	GR.	CPLG.	DESIGN FACTORS		
						BURST	COLLAPSE	TENSION
CONDUCTOR	14"	0-40'						
						3,390	1,880	348,000
SURFACE	8-5/8"	0 to 2,300	28.00	IJ-55	LTC	0.82	1.75	5.35
						7,780	6,350	278,000
PRODUCTION	4-1/2"	0 to 9,700	11.60	I-80	BTC	1.92	1.03	2.83

\*Burst on surface casing is controlled by fracture gradient as shoe with gas gradient above.

D.F. = 2.34

1) Max Anticipated Surf. Press.(MASP) (Surface Casing) = (Pore Pressure at next csg point-(0.22 psi/ft-partial evac gradient x TVD of next csg point))

2) MASP (Prod Casing) = Pore Pressure at TD - (0.22 psi/ft-partial evac gradient x TD)

(Burst Assumptions: TD = 12.4 ppg)

0.22 psi/ft = gradient for partially evac wellbore

(Collapse Assumption: Fully Evacuated Casing, Max MW)

(Tension Assumptions: Air Weight of Casing\*Buoy.Fact. of water)

**MASP 3,934 psi**

3) Maximum Anticipated Bottom Hole Pressure (MABHP) = Pore Pressure at TD

(Burst Assumptions: TD = 12.4 ppg)

0.63 psi/ft = bottomhole gradient

(Collapse Assumption: Fully Evacuated Casing, Max MW)

(Tension Assumptions: Air Weight of Casing\*Buoy.Fact. of water)

**MABHP 6,027 psi**

#### CEMENT PROGRAM

		FT. OF FILL	DESCRIPTION	SACKS	EXCESS	WEIGHT	YIELD
SURFACE	TAIL	500'	Premium cmt + 2% CaCl	180	60%	15.80	1.15
Option 1			+ 0.25 pps flocele				
	TOP OUT CMT (6 jobs)	1,200'	20 gals sodium silicate + Premium cmt	270	0%	15.80	1.15
			+ 2% CaCl + 0.25 pps flocele				
SURFACE		<b>NOTE: If well will circulate water to surface, option 2 will be utilized</b>					
Option 2	LEAD	1,800'	65/35 Poz + 6% Gel + 10 pps gilsonite	170	35%	11.00	3.82
			+ 0.25 pps Flocele + 3% salt BWOW				
	TAIL	500'	Premium cmt + 2% CaCl	150	35%	15.80	1.15
			+ 0.25 pps flocele				
	TOP OUT CMT	as required	Premium cmt + 2% CaCl	as req.		15.80	1.15
PRODUCTION	LEAD	4,120'	Premium Lite II +0.25 pps	300	10%	11.00	3.38
			celloflake + 5 pps gilsonite + 10% gel				
			+ 0.5% extender				
	TAIL	5,580'	50/50 Poz/G + 10% salt + 2% gel	1,080	10%	14.30	1.31
			+ 0.1% R-3				

\*Substitute caliper hole volume plus 0% excess for LEAD if accurate caliper is obtained

\*Substitute caliper hole volume plus 10% excess for TAIL if accurate caliper is obtained

#### FLOAT EQUIPMENT & CENTRALIZERS

SURFACE	Guide shoe, 1 jt, insert float. Centralize first 3 joints with bow spring centralizers. Thread lock guide shoe
PRODUCTION	Float shoe, 1 jt, float collar. No centralizers will be used.

#### ADDITIONAL INFORMATION

Test casing head to 750 psi after installing. Test surface casing to 1,500 psi prior to drilling out.

BOPE: 11" 5M with one annular and 2 rams. The BOPE will be installed before the production hole is drilled and tested to 5,000 psi (annular to 2,500 psi) prior to drilling out the surface casing shoe. Record on chart recorder and tour sheet. Function test rams on each trip. Maintain safety valve and inside BOP on rig floor at all times. Most rigs have top drives; however, if used, the Kelly is to be equipped with upper and lower kelly valves.

Surveys will be taken at 1,000' minimum intervals.

Most rigs have PVT System for mud monitoring. If no PVT is available, visual monitoring will be utilized.

DRILLING ENGINEER:

John Huycke / Emile Goodwin

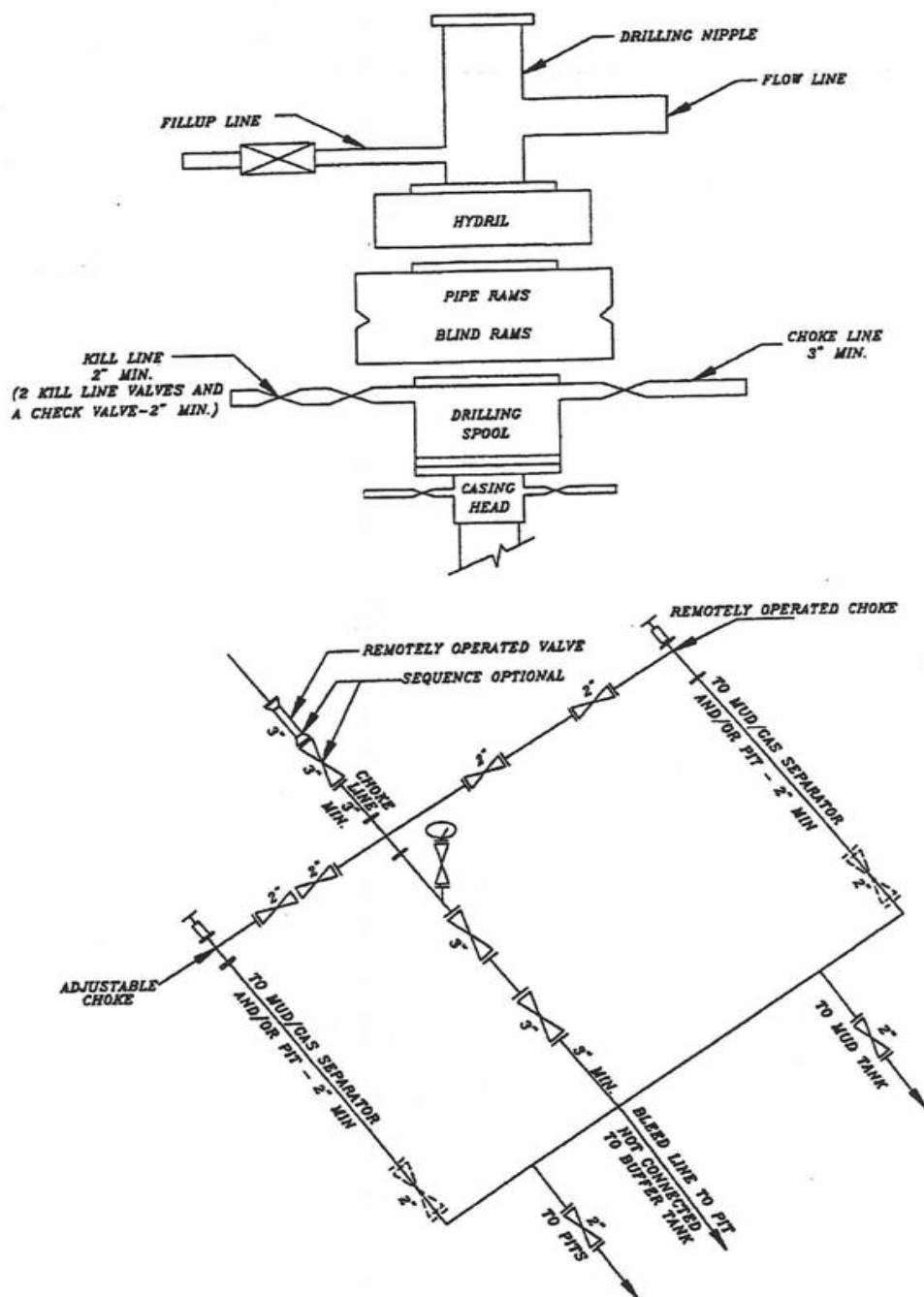
DATE:

DRILLING SUPERINTENDENT:

John Merkel / Lovel Young

DATE:

# EXHIBIT A NBU 921-2504BS



SCHEMATIC DIAGRAM OF 5,000 PSI BOP STACK

# T9S, R21E, S.L.B.&M.

Found 2006  
Aluminum Cap,  
Pile of Stones.

S89°47.1'W - 39.951 (G.L.O.)  
S89°48'41"W - 2636.93' (Meas.)

N89°45.6'W - 40.017 (G.L.O.)  
N89°44'20"W - 2641.16' (Meas.)

Found 1977  
Brass Cap. Pile  
of Stones.

Found 2006  
Aluminum Cap  
under E/W Fence

NBU 921-25O4BS (Surface Position)  
NAD 83 LATITUDE = 40.002912° (40° 00' 10.484")  
LONGITUDE = 109.500232° (109° 30' 00.834")  
NAD 27 LATITUDE = 40.002947° (40° 00' 10.610")  
LONGITUDE = 109.499545° (109° 29' 58.362")

NBU 921-25O4BS (Bottom Hole)  
NAD 83 LATITUDE = 40.001068° (40° 00' 03.844")  
LONGITUDE = 109.496861° (109° 29' 48.701")  
NAD 27 LATITUDE = 40.001103° (40° 00' 03.970")  
LONGITUDE = 109.496175° (109° 29' 46.230")

N00°04'14"W - 2637.48' (Meas.)  
N0°01'W (G.L.O.)

Found 1"  
Aluminum Cap on  
5/8" Rebar. Pile  
of Stones.

2643.12' (Measured)  
N00°01'58"W (Basis of Bearings)

Found 1"  
Aluminum Cap on  
5/8" Rebar. Pile  
of Stones.

N89°55'26"W - 2639.89' (Meas.)

WEST - 80.00 (G.L.O.)

N89°56'39"W - 2639.91' (Meas.)

N00°05'10"W - 2643.59' (Meas.)  
N0°10'W - 40.06 (G.L.O.)

Found 1977  
Brass Cap.  
Pile of Stones.

N00°03'18"W - 2639.74' (Meas.)  
N0°03'W (G.L.O.)

Found 1977  
Brass Cap.  
Pile of Stones.

**WELL LOCATION:**  
**NBU 921-25O4BS**  
ELEV. UNGRADED GROUND = 4955.6'

2595'

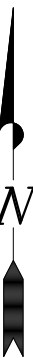
1156'

Well Surface  
Position

Bottom of  
Hole

Found 1"  
Aluminum Cap on  
5/8" Rebar, with a  
Stone on East  
side of Cap.

1741'



SCALE

## SURVEYOR'S CERTIFICATE

THIS IS TO CERTIFY THAT THE ABOVE PLAT WAS PREPARED FROM FIELD NOTES OF ACTUAL SURVEYS MADE BY ME OR UNDER MY SUPERVISION AND THAT THE SAME ARE TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF.

PROFESSIONAL LAND SURVEYOR  
No. 6028691  
JOHN R. STAUGH  
STATE OF UTAH

PROFESSIONAL LAND SURVEYOR  
REGISTRATION No. 6028691  
STATE OF UTAH

## NOTES:

▲ = Section Corners Located

- Well footages are measured at right angles to the Section Lines.
- G.L.O. distances are shown in feet or chains.  
1 chain = 66 feet.
- The Bottom of hole bears S54°32'22"E 1159.12' from the Surface Position.
- Bearings are based on Global Positioning Satellite observations.
- Basis of elevation is Tri-Sta "Two Water" located in the NW ¼ of Section 1, T10S, R21E, S.L.B.&M. The elevation of this Tri-Sta is shown on the Big Pack Mtn NE 7.5 Min. Quadrangle as being 5238'.

**Kerr-McGee Oil & Gas Onshore, LP**  
1099 18th Street - Denver, Colorado 80202

**WELL PAD: NBU 921-25N**

**NBU 921-25O4BS**  
**WELL PLAT**

**485' FSL, 1741' FEL (Bottom Hole)**

**SW ¼ SE ¼ OF SECTION 25, T9S, R21E,  
S.L.B.&M., UTAH COUNTY, UTAH.**



**609 CONSULTING, LLC**  
371 Coffeen Avenue  
Sheridan WY 82801  
Phone 307-674-0609  
Fax 307-674-0182

**TIMBERLINE**

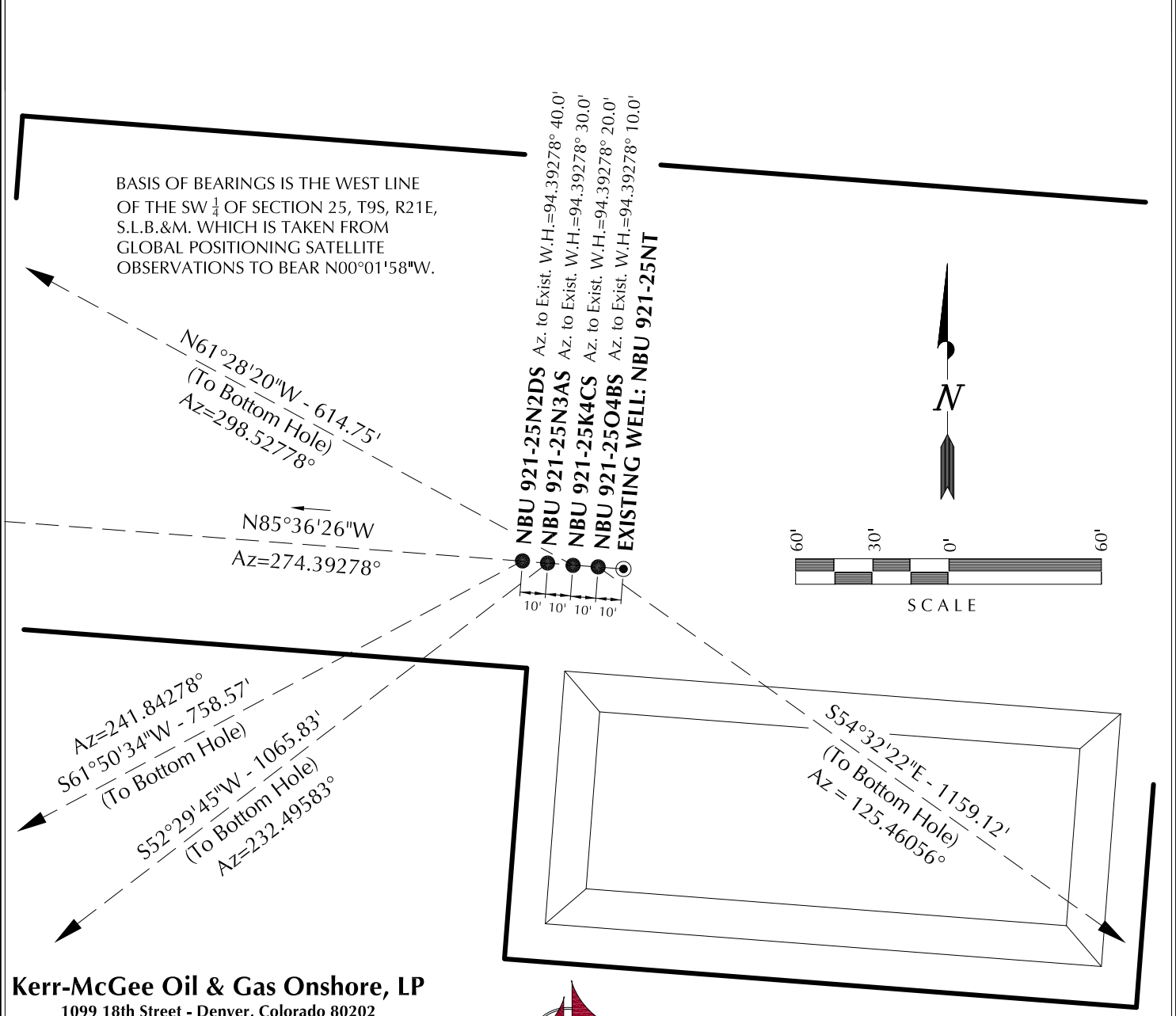
(435) 789-1365

**ENGINEERING & LAND SURVEYING, INC.**  
209 NORTH 300 WEST - VERNAL, UTAH 84078

DATE SURVEYED: 04-02-10	SURVEYED BY: D.J.S.	SHEET NO:  <b>4</b>  4 OF 16
DATE DRAWN: 04-07-10	DRAWN BY: B.M.	
SCALE: 1" = 1000'	Date Last Revised: 06-09-10	

WELL NAME	SURFACE POSITION					BOTTOM HOLE				
	NAD83		NAD27		FOOTAGES	NAD83		NAD27		FOOTAGES
	LATITUDE	LONGITUDE	LATITUDE	LONGITUDE		LATITUDE	LONGITUDE	LATITUDE	LONGITUDE	
NBU 921-25N2DS	40°00'10.507" 40.002919°	109°30'01.217" 109.500338°	40°00'10.633" 40.002954°	109°29'58.746" 109.499652°	1159' FSL 2565' FWL	40°00'06.967" 40.001935°	109°30'09.807" 109.502724°	40°00'07.094" 40.001970°	109°30'07.335" 109.502038°	800' FSL 1896' FWL
NBU 921-25N3AS	40°00'10.499" 40.002916°	109°30'01.090" 109.500303°	40°00'10.625" 40.002951°	109°29'58.618" 109.499616°	1158' FSL 2575' FWL	40°00'04.084" 40.001134°	109°30'11.949" 109.503319°	40°00'04.210" 40.001170°	109°30'09.477" 109.502632°	508' FSL 1729' FWL
NBU 921-25K4CS	40°00'10.490" 40.002914°	109°30'00.961" 109.500267°	40°00'10.616" 40.002949°	109°29'58.489" 109.499580°	1157' FSL 2585' FWL	40°00'13.388" 40.003719°	109°30'07.901" 109.502195°	40°00'13.514" 40.003754°	109°30'05.430" 109.501508°	1450' FSL 2045' FWL
NBU 921-25O4BS	40°00'10.484" 40.002912°	109°30'00.834" 109.500232°	40°00'10.610" 40.002947°	109°29'58.362" 109.499545°	1156' FSL 2595' FWL	40°00'03.844" 40.001068°	109°29'48.701" 109.496861°	40°00'03.970" 40.001103°	109°29'46.230" 109.496175°	485' FSL 1741' FEL
NBU 921-25NT	40°00'10.475" 40.002910°	109°30'00.705" 109.500196°	40°00'10.602" 40.002945°	109°29'58.234" 109.499509°	1156' FSL 2605' FWL					

RELATIVE COORDINATES - From Surface Position to Bottom Hole											
WELL NAME	NORTH	EAST	WELL NAME	NORTH	EAST	WELL NAME	NORTH	EAST	WELL NAME	NORTH	EAST
NBU 921-25N2DS	-358.0'	-668.8'	NBU 921-25N3AS	-648.9'	-845.5'	NBU 921-25K4CS	293.6'	-540.1'	NBU 921-25O4BS	-672.5'	944.1'



Kerr-McGee Oil & Gas Onshore, LP  
1099 18th Street - Denver, Colorado 80202

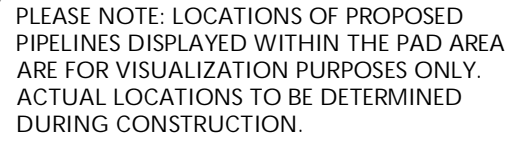
WELL PAD - NBU 921-25N
WELL PAD INTERFERENCE PLAT WELLS - NBU 921-25N2DS, NBU 921-25N3AS, NBU 921-25K4CS & NBU 921-25O4BS LOCATED IN SECTION 25, T9S, R21E, S.L.B.&M., UINTAH COUNTY, UTAH.










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371 Coffeen Avenue  
Sheridan WY 82801  
Phone 307-674-0609  
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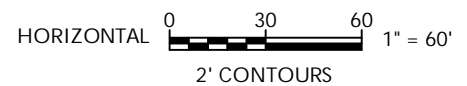
TIMBERLINE ENGINEERING & LAND SURVEYING, INC. 209 NORTH 300 WEST - VERNAL, UTAH 84078 (435) 789-1365		
DATE SURVEYED: 04-02-10	SURVEYED BY: D.J.S.	SHEET NO:  <b>5</b> 5 OF 16
DATE DRAWN: 04-07-10	DRAWN BY: B.M.	
SCALE: 1" = 60'	Date Last Revised: 06-09-10 B.M.	



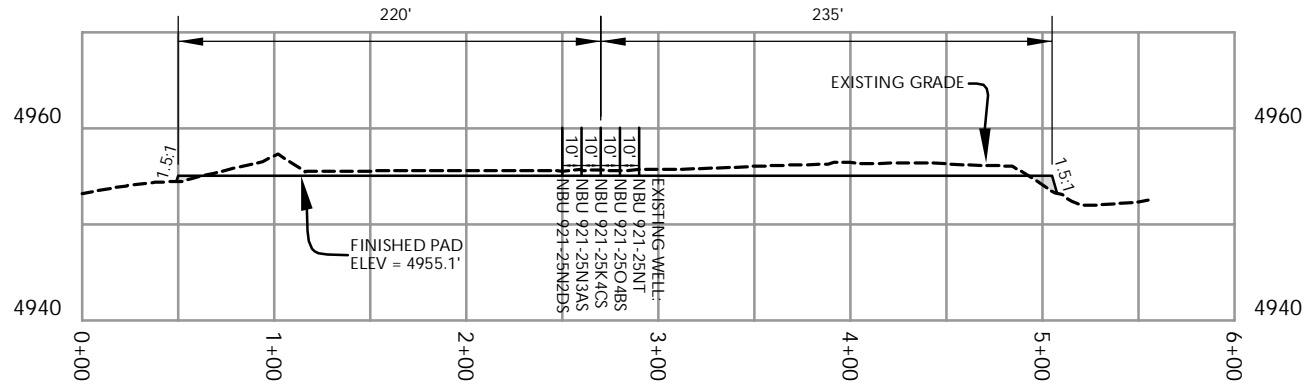


### WELL PAD LEGEND

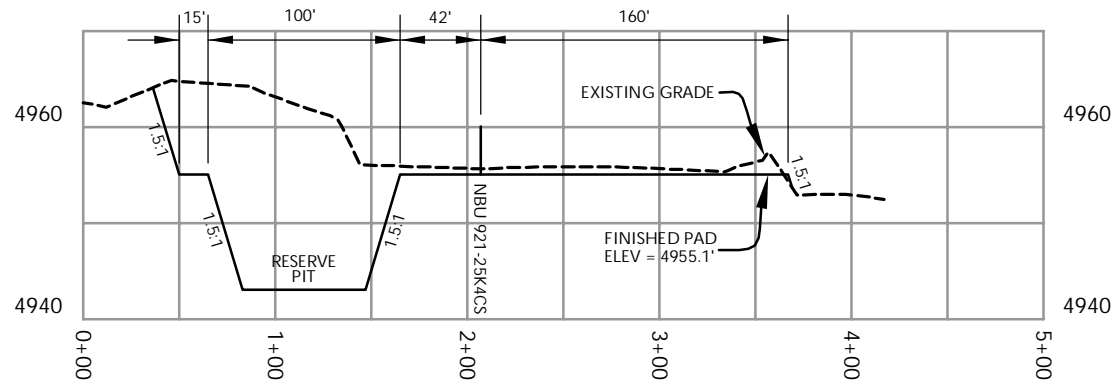
	EXISTING WELL LOCATION
	PROPOSED WELL LOCATION
	PROPOSED BOTTOM HOLE LOCATION
	EXISTING CONTOURS (2' INTERVAL)
	PROPOSED CONTOURS (2' INTERVAL)
	PROPOSED PIPELINE
	EXISTING PIPELINE



6 6 OF 16



**CROSS SECTION A-A'**



**CROSS SECTION B-B'**

NOTE: CROSS SECTION B-B' DEPICTS  
MAXIMUM RESERVE PIT DEPTH.

**Kerr-McGee Oil & Gas Onshore, LP**  
1099 18th Street - Denver, Colorado 80202

**WELL PAD - NBU 921-25N**

**WELL PAD - CROSS SECTIONS**

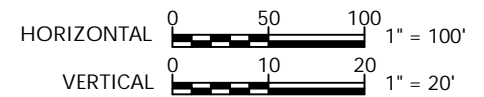
NBU 921-25N2DS, NBU 921-25N3AS,  
NBU 921-25K4CS & NBU 921-25O4BS  
LOCATED IN SECTION 25, T9S, R21E,  
S.L.B.&M., UTAH COUNTY, UTAH



**CONSULTING, LLC**  
371 Coffeen Avenue  
Sheridan, WY 82801  
Phone 307-674-0609  
Fax 307-674-0182

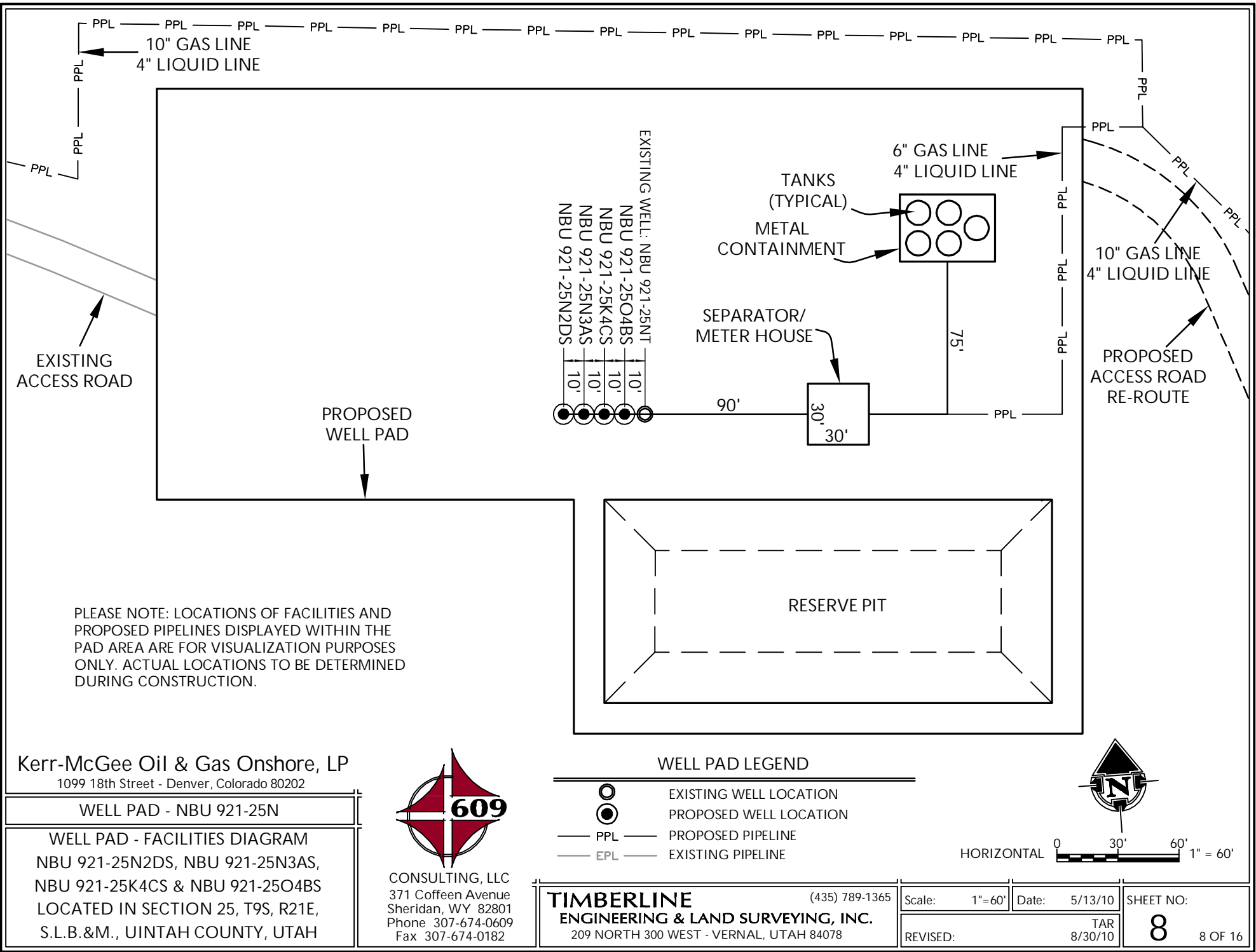
**TIMBERLINE**  
**ENGINEERING & LAND SURVEYING, INC.**  
209 NORTH 300 WEST - VERNAL, UTAH 84078

(435) 789-1365



Scale: 1"=100'	Date: 5/13/10	SHEET NO:
REVISED:	TAR 7/7/10	<b>7</b> 7 OF 16

'APIWellNo:43047512640000'





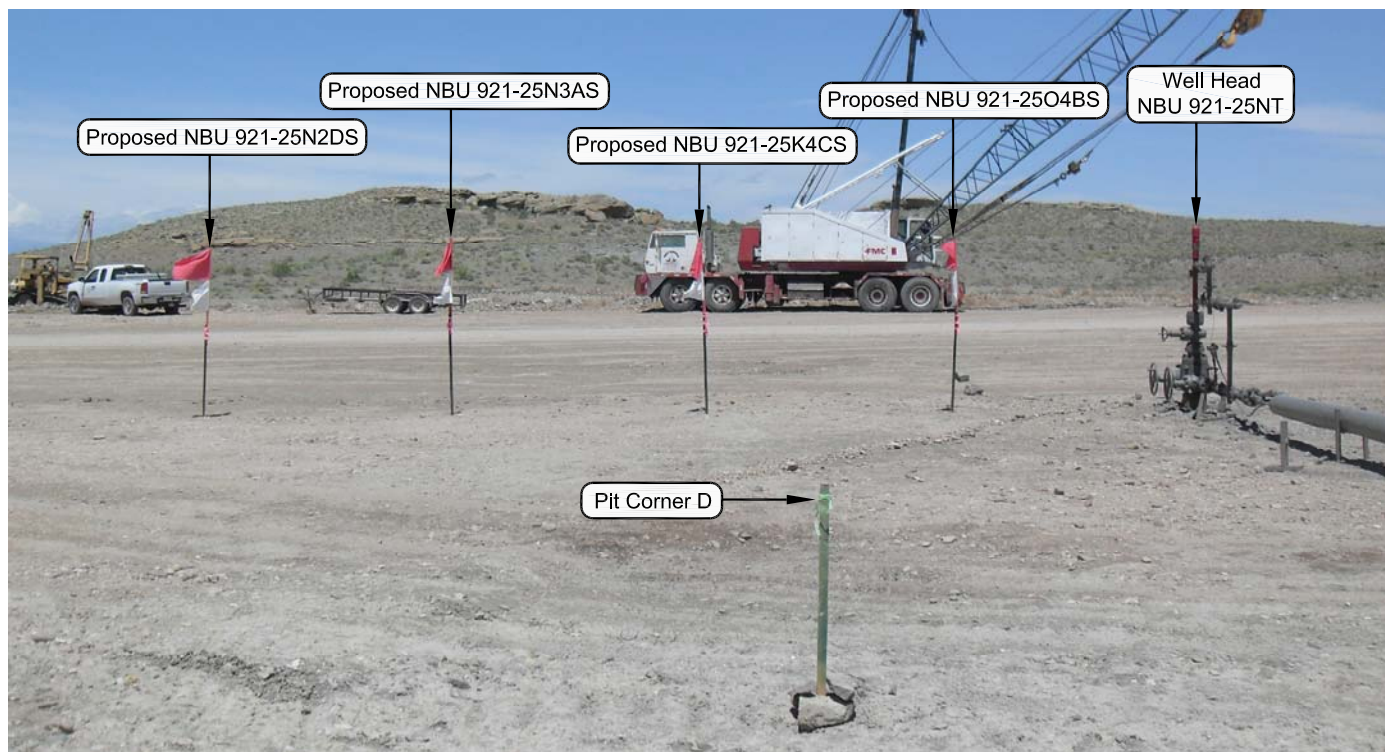


PHOTO VIEW: FROM PIT CORNER D TO LOCATION STAKE

CAMERA ANGLE: NORTHERLY



PHOTO VIEW: FROM EXISTING ACCESS ROAD

CAMERA ANGLE: SOUTHEASTERLY

**Kerr-McGee Oil & Gas Onshore, LP**  
1099 18th Street - Denver, Colorado 80202

**WELL PAD - NBU 921-25N**

**LOCATION PHOTOS**  
NBU 921-25N2DS, NBU 921-25N3AS,  
NBU 921-25K4CS & NBU 921-25O4BS  
LOCATED IN SECTION 25, T9S, R21E,  
S.L.B.&M., UTAH COUNTY, UTAH.



**CONSULTING, LLC**  
371 Coffeen Avenue  
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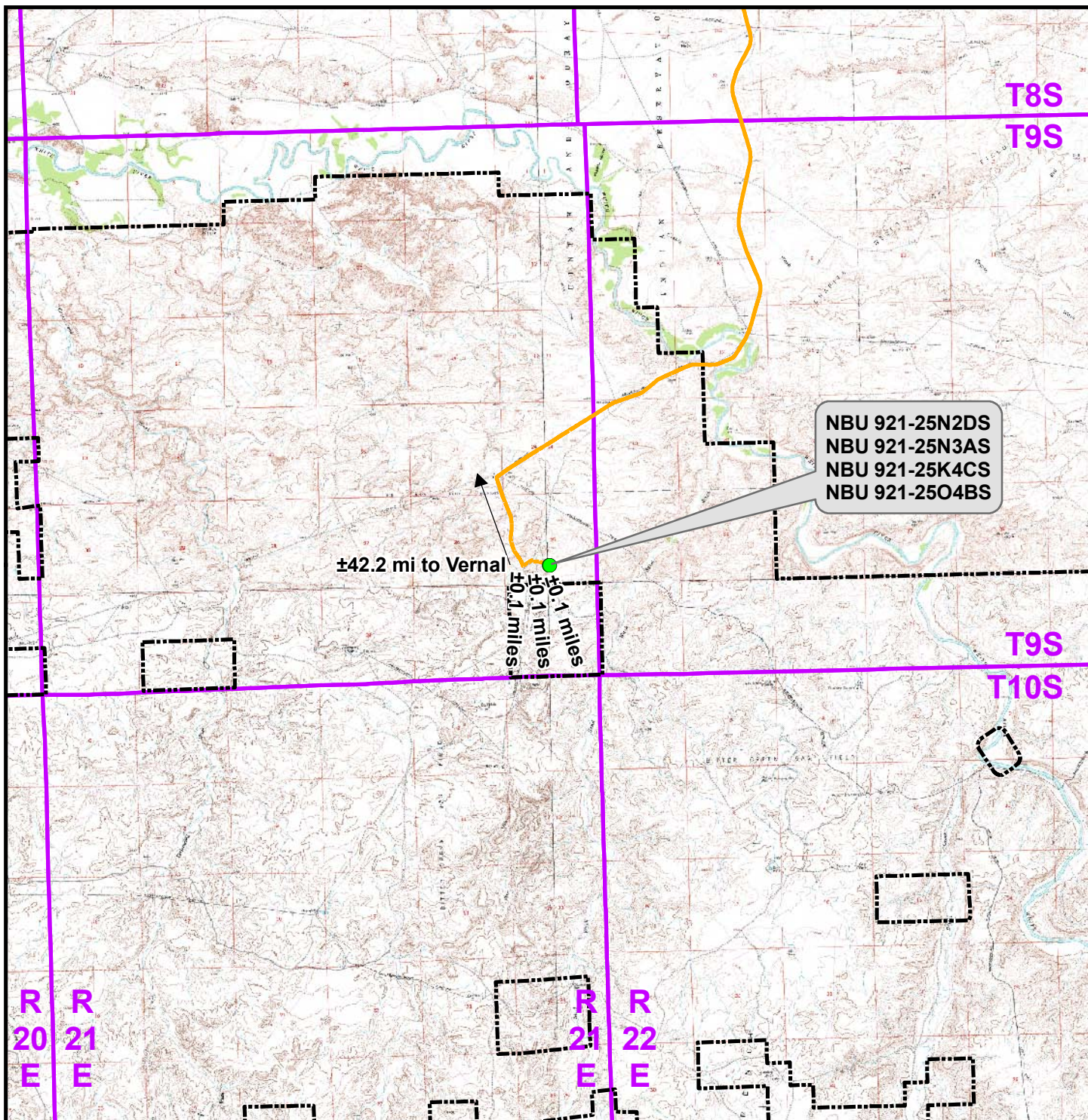
**TIMBERLINE**

(435) 789-1365

ENGINEERING & LAND SURVEYING, INC.  
209 NORTH 300 WEST - VERNAL, UTAH 84078

DATE PHOTOS TAKEN: 04-02-10	PHOTOS TAKEN BY: D.J.S.	SHEET NO:  <b>9</b> 9 OF 16
DATE DRAWN: 04-07-10	DRAWN BY: B.M.	
Date Last Revised: 06-09-10 B.M.		





**Legend**

- Proposed Well Location
- Natural Buttes Unit Boundary
- Access Route - Proposed

Distance From Well Pad - NBU 921-25N To Unit Boundary: ±1,156ft

**Kerr-McGee Oil & Gas Onshore, LP**  
1099 18th Street, Denver, Colorado 80202

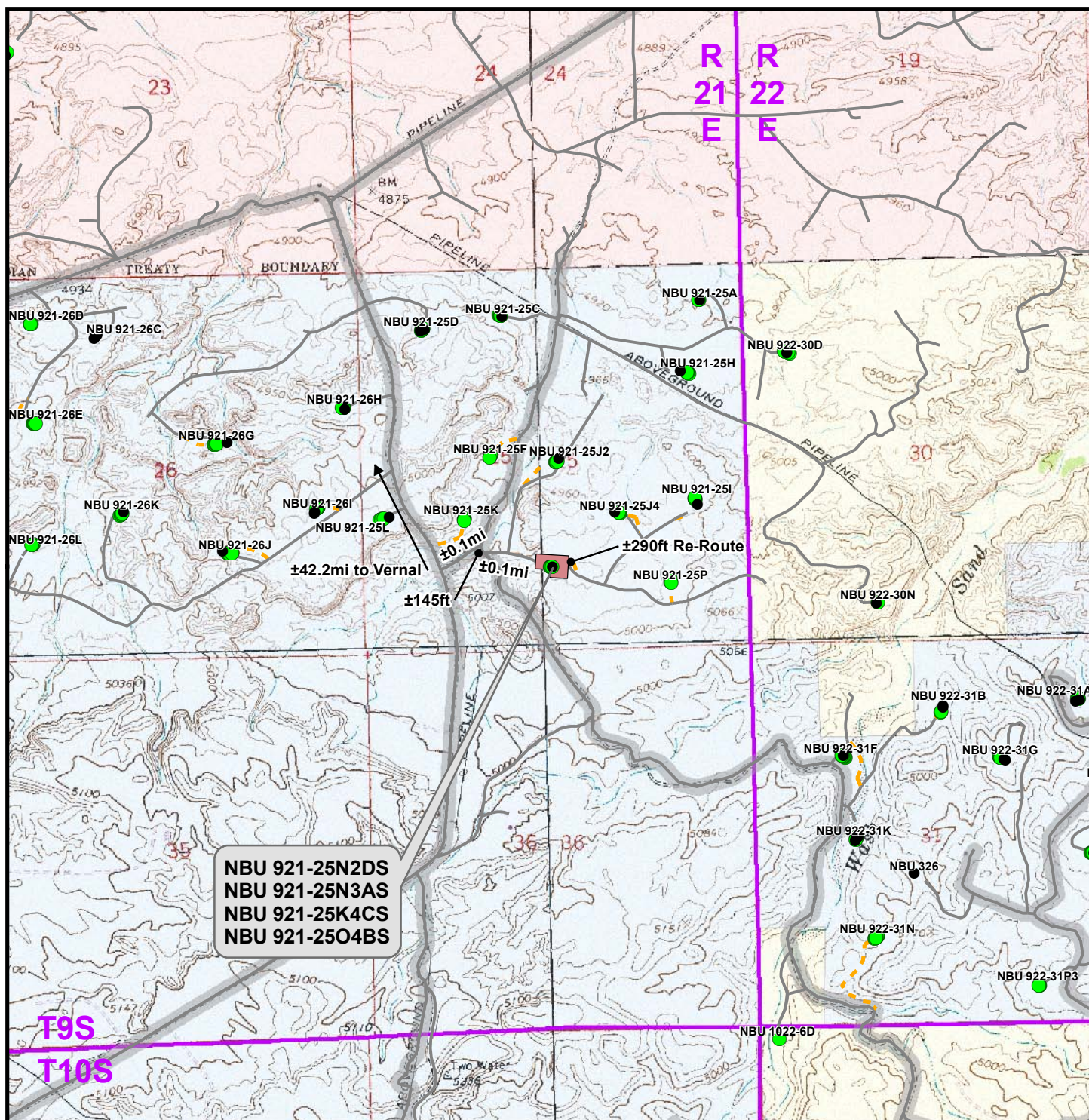
**WELL PAD - NBU 921-25N**

**TOPO A**  
NBU 921-25N2DS, NBU 921-25N3AS,  
NBU 921-25K4CS & NBU 921-25O4BS  
LOCATED IN SECTION 25, T9S, R21E  
S.L.B.&M., UTAH COUNTY, UTAH



Scale: 1:100,000	NAD83 USP Central	Sheet No:
Drawn: CPS	Date: 14 May 2010	<b>10</b> 10 of 16
Revised: CPS	Date: 7 July 2010	





### Legend

- Well - Proposed
- Well - Existing
- Well Pad
- Road - Proposed
- Road - Existing
- County Road
- Bureau of Land Management
- Indian Reservation
- State
- Private

Total Proposed Road Re-Route Length: ±290ft

**Kerr-McGee Oil & Gas Onshore, LP**  
1099 18th Street, Denver, Colorado 80202

### WELL PAD - NBU 921-25N

#### TOPO B

NBU 921-25N2DS, NBU 921-25N3AS,  
NBU 921-25K4CS & NBU 921-25O4BS  
LOCATED IN SECTION 25, T9S, R21E  
S.L.B.&M., UTAH COUNTY, UTAH



**609 CONSULTING, LLC**  
371 Coffeen Avenue  
Sheridan, WY 82801  
Phone (307) 674-0609  
Fax (307) 674-0182

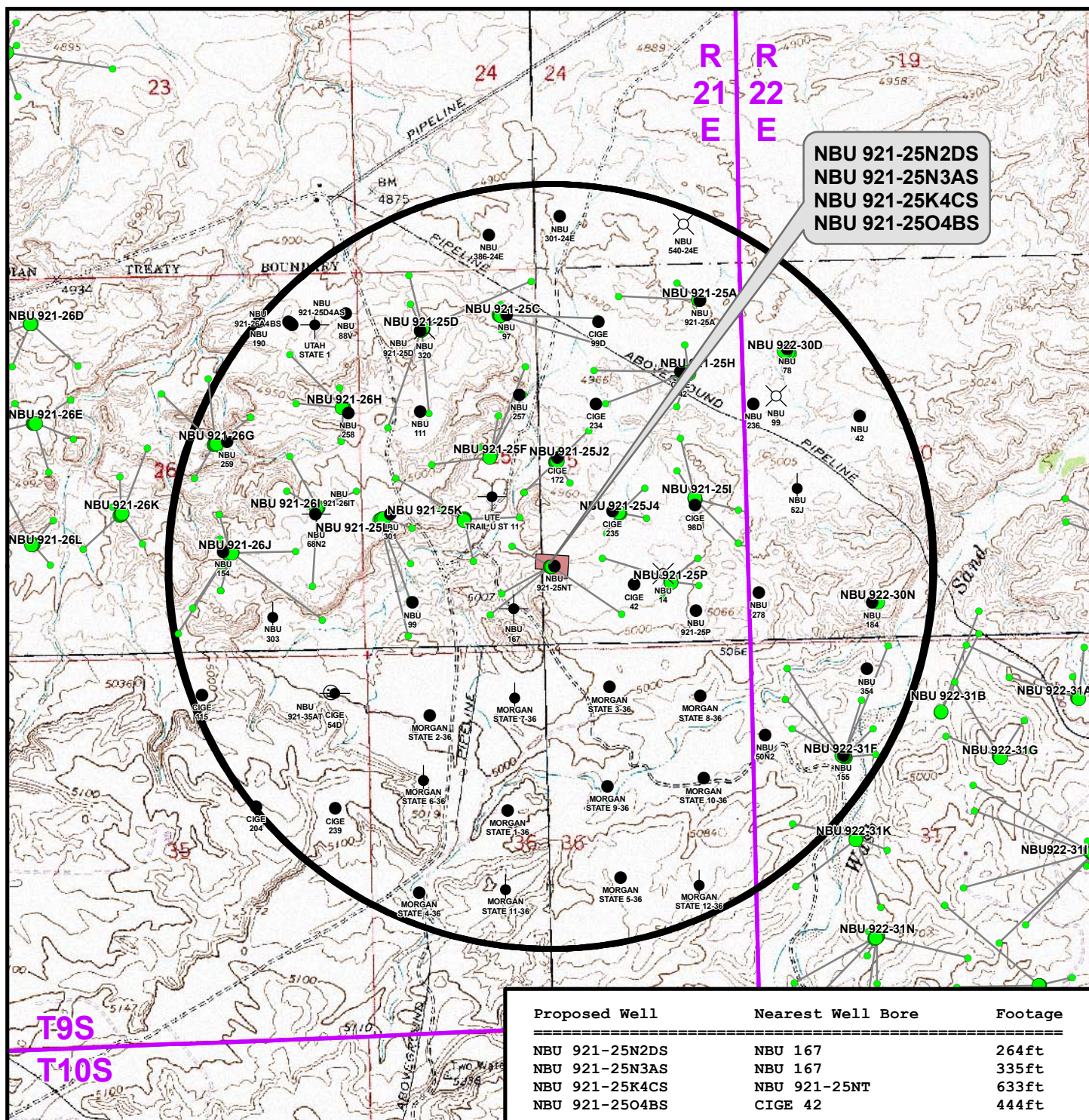


Scale: 1" = 2,000ft  
NAD83 USP Central  
Drawn: CPS  
Revised: JFE  
Date: 23 June 2010  
Date: 31 Aug 2010

Sheet No:

**11** 11 of 16





### Legend

- Well - Proposed
- Bottom Hole - Proposed
- Well Path
- Well Pad
- Well - 1 Mile Radius

**Kerr-McGee Oil & Gas Onshore, LP**  
1099 18th Street, Denver, Colorado 80202

### WELL PAD - NBU 921-25N

#### TOPO C

NBU 921-25N2DS, NBU 921-25N3AS,  
NBU 921-25K4CS & NBU 921-25O4BS  
LOCATED IN SECTION 25, T9S, R21E  
S.L.B.&M., Uintah County, Utah

Well locations derived from State of Utah, Dept. of Natural Resources, Division of Oil, Gas and Mining



**609 CONSULTING, LLC**  
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Sheridan, WY 82801  
Phone (307) 674-0609  
Fax (307) 674-0182



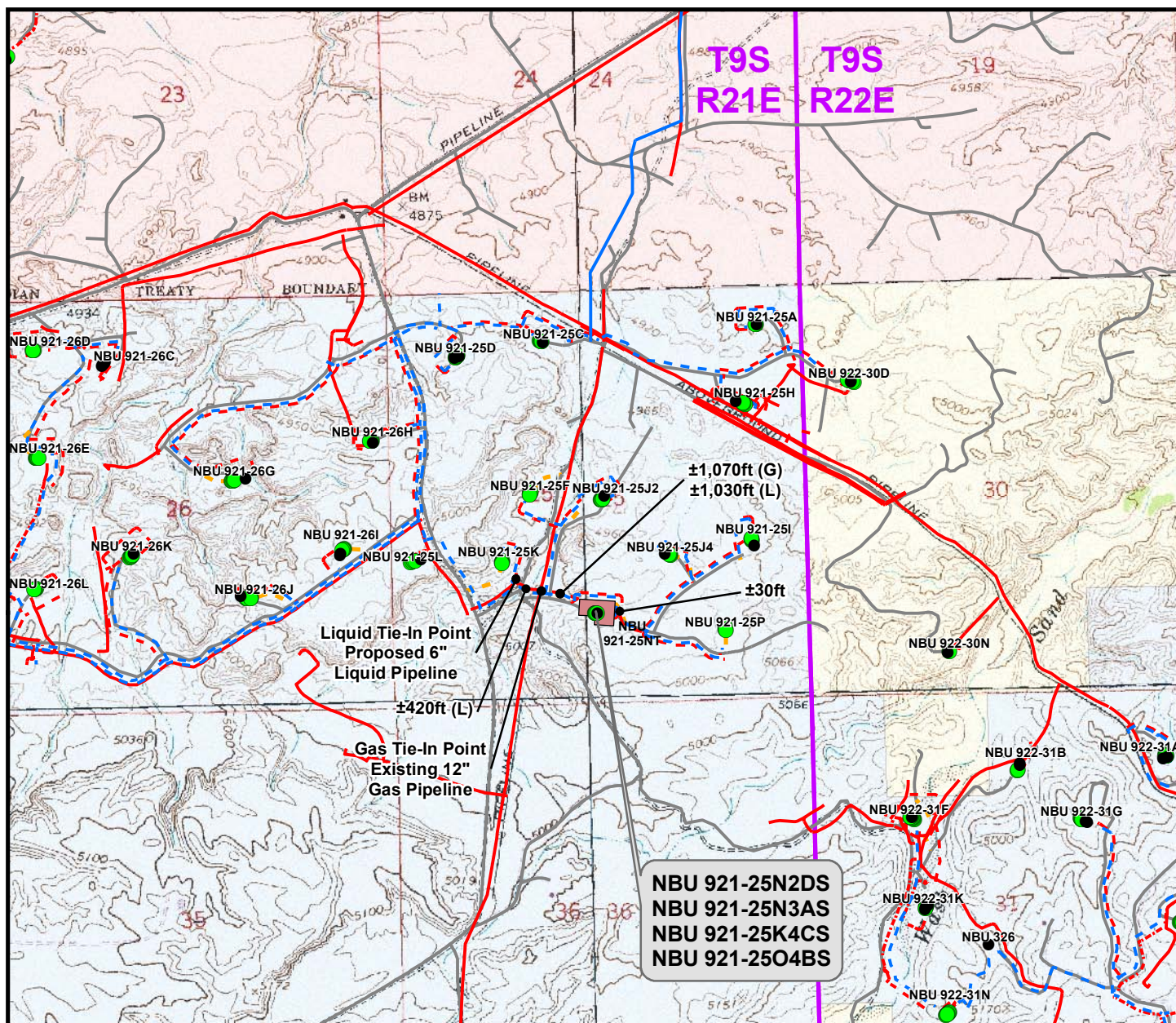
- Producing
- Temporarily-Abandoned
- Shut-In
- Plugged and Abandoned
- Location Abandoned
- Dry hole marker, buried
- Returned APD (Unapproved)
- Active
- Spudded (Drilling commenced; Not yet completed)
- Approved permit (APD); not yet spudded
- New Permit (Not yet approved or drilled)
- Inactive
- Drilling Operations Suspended

Scale: 1" = 2,000ft  
NAD83 USP Central  
Drawn: CPS  
Revised: JFE

Date: 14 May 2010  
Date: 31 Aug 2010

Sheet No:  
**12** 12 of 16





Proposed Liquid Pipeline	Length
Proposed 4" (Meter House to Edge of Pad)	±260ft
Proposed 4" (Edge of Pad to 25J4 Intersection)	±30ft
Proposed 4" (25J4 Intersection to 25J2 Intersection)	±1,030ft
Proposed 6" (25J2 Intersection to 25K Intersection)	±420ft
<b>TOTAL PROPOSED LIQUID PIPELINE =</b>	<b>± 1,740ft</b>

Proposed Gas Pipeline	Length
Proposed 6" (Meter House to Edge of Pad)	±260ft
Proposed 6" (Edge of Pad to 25J4 Intersection)	±30ft
Proposed 10" (25J4 Intersection to Existing 12" Pipeline)	±1,070ft
<b>TOTAL PROPOSED GAS PIPELINE =</b>	<b>±1,360ft</b>

### Legend

● Well - Proposed	- - - Gas Pipeline - Proposed	- - - Liquid Pipeline - Proposed	- - - Road - Proposed	Yellow Box Bureau of Land Management
● Well - Existing	- - - Gas Pipeline - To Be Upgraded	- - - Liquid Pipeline - To Be Upgraded	- - - Road - Existing	Pink Box Indian Reservation
Red Box Well Pad	- - - Gas Pipeline - Existing	- - - Liquid Pipeline - Existing		Blue Box State
				White Box Private

**Kerr-McGee Oil & Gas Onshore, LP**  
1099 18th Street, Denver, Colorado 80202

**WELL PAD - NBU 921-25N**

**TOPO D**  
**NBU 921-25N2DS, NBU 921-25N3AS,**  
**NBU 921-25K4CS & NBU 921-25O4BS**  
**LOCATED IN SECTION 25, T9S, R21E**  
**S.L.B.&M., UTAH COUNTY, UTAH**

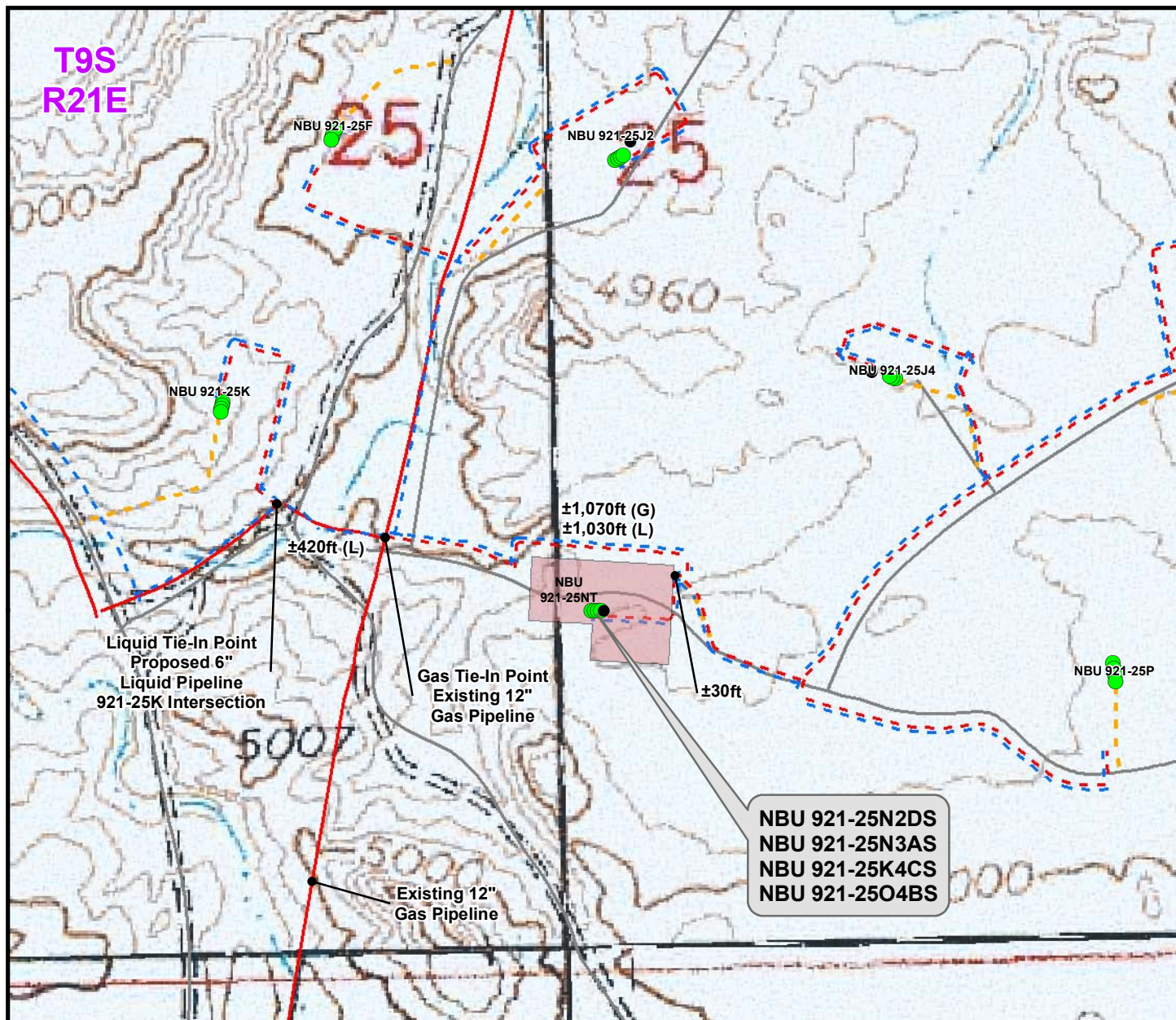


Scale: 1" = 2,000ft	NAD83 USP Central
Drawn: CPS	Date: 14 May 2010
Revised: CPS	Date: 31 Aug 2010

Sheet No:

**13** 13 of 16





Proposed Liquid Pipeline	Length
Proposed 4" (Meter House to Edge of Pad)	±260ft
Proposed 4" (Edge of Pad to 25J4 Intersection)	±30ft
Proposed 4" (25J4 Intersection to 25J2 Intersection)	±1,030ft
Proposed 6" (25J2 Intersection to 25K Intersection)	±420ft
<b>TOTAL PROPOSED LIQUID PIPELINE =</b>	<b>± 1,740ft</b>

Proposed Gas Pipeline	Length
Proposed 6" (Meter House to Edge of Pad)	±260ft
Proposed 6" (Edge of Pad to 25J4 Intersection)	±30ft
Proposed 10" (25J4 Intersection to Existing 12" Pipeline)	±1,070ft
<b>TOTAL PROPOSED GAS PIPELINE =</b>	<b>±1,360ft</b>

### Legend

- Well - Proposed
- Well - Existing
- Well Pad
- - - Gas Pipeline - Proposed
- - - Gas Pipeline - To Be Upgraded
- Gas Pipeline - Existing
- - - Liquid Pipeline - Proposed
- - - Liquid Pipeline - To Be Upgraded
- Liquid Pipeline - Existing
- - - Road - Proposed
- Road - Existing
- Bureau of Land Management
- Indian Reservation
- State
- Private

**Kerr-McGee Oil & Gas Onshore, LP**  
1099 18th Street, Denver, Colorado 80202

### WELL PAD - NBU 921-25N

**TOPO D2 (PAD & PIPELINE DETAIL)**  
NBU 921-25N2DS, NBU 921-25N3AS,  
NBU 921-25K4CS & NBU 921-25O4BS  
LOCATED IN SECTION 25, T9S, R21E  
S.L.B.&M., Uintah County, Utah

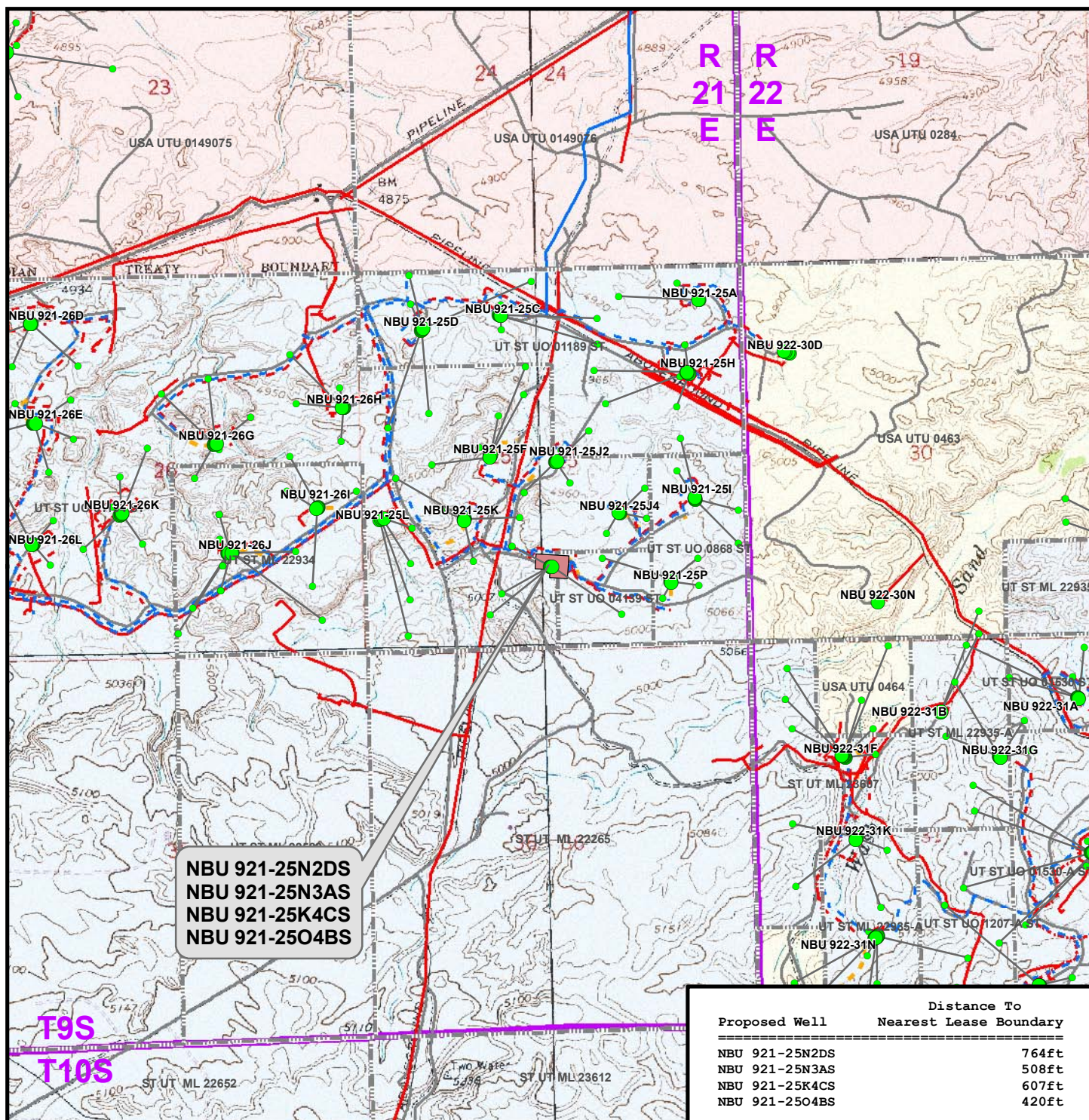


Scale: 1" = 500ft	NAD83 USP Central
Drawn: CPS	Date: 14 May 2010
Revised: JFE	Date: 31 Aug 2010

Sheet No:

**14**  
14 of 16





# Legend

- Well - Proposed
- Bottom Hole - Proposed
- Well Path
- Well Pad
- Lease Boundary
- Gas Pipeline - Proposed
- Gas Pipeline - To Be Upgraded
- Gas Pipeline - Existing
- Liquid Pipeline - Proposed
- Liquid Pipeline - To Be Upgraded
- Liquid Pipeline - Existing
- Road - Proposed
- Road - Existing
- Bureau of Land Management
- Indian Reservation
- State
- Private

**Kerr-McGee Oil & Gas Onshore, LP**  
1099 18th Street, Denver, Colorado 80202

## WELL PAD - NBU 921-25N

### TOPO E

NBU 921-25N2DS, NBU 921-25N3AS,  
NBU 921-25K4CS & NBU 921-25O4BS  
LOCATED IN SECTION 25, T9S, R21E  
S.L.B.&M., Uintah County, Utah



**609 CONSULTING, LLC**  
371 Coffeen Avenue  
Sheridan, WY 82801  
Phone (307) 674-0609  
Fax (307) 674-0182



Scale: 1" = 2,000ft  
NAD83 USP Central  
Drawn: CPS  
Revised: JFE  
Date: 14 May 2010  
Date: 31 Aug 2010

Sheet No:

**15** 15 of 16

**Kerr-McGee Oil & Gas Onshore, LP**  
**WELL PAD – NBU 921-25N**  
**WELLS – NBU 921-25N2DS, NBU 921-25N3AS,**  
**NBU 921-25K4CS & NBU 921-25O4BS**  
**Section 25, T9S, R21E, S.L.B.&M.**

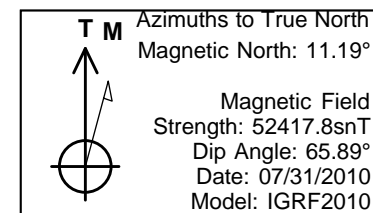
From the intersection of U.S. Highway 40 and 500 East Street in Vernal, Utah proceed in an easterly then southerly direction along U.S. Highway 40 approximately 3.3 miles to the junction of State Highway 45; exit right and proceed in a southerly direction along State Highway 45 approximately 20.2 miles to the junction of the Glen Bench Road (County B Road 3260). Exit right and proceed in a southwesterly direction along the Glen Bench Road approximately 18.7 miles to a Class D County Road to the northeast. Exit left and proceed in a northeasterly direction along Class D County Road approximately 0.1 miles to a second Class D County Road to the southeast. Exit right and proceed in a southeasterly direction along second Class D County road approximately 145 feet to a service road to the east. Exit left and proceed in an easterly then southeasterly direction along service road approximately 0.1 miles to the proposed well location.

Total distance from Vernal, Utah to the proposed well location is approximately 42.4 miles in a southerly direction.



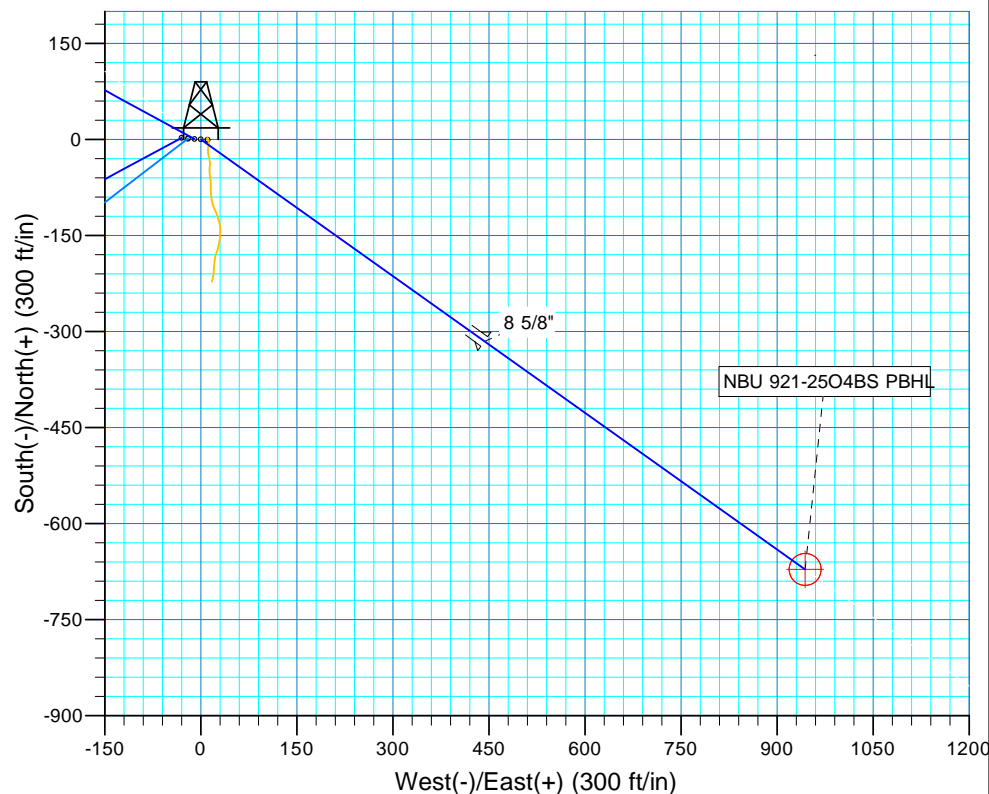
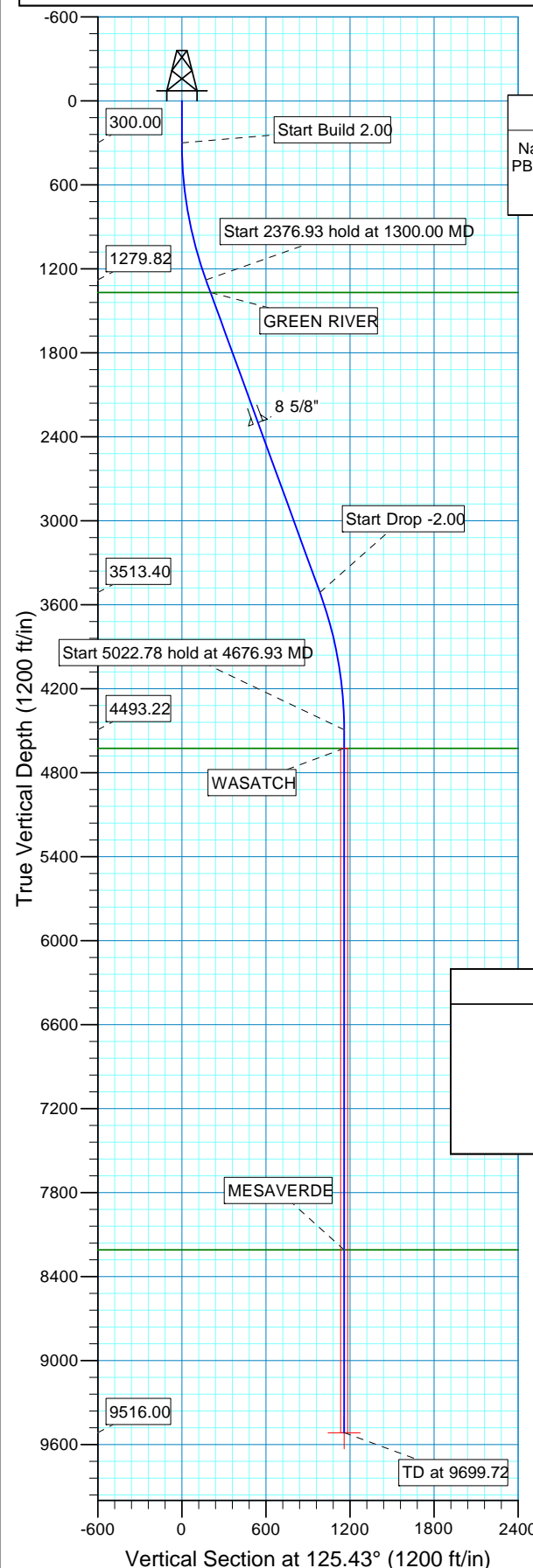
WELL DETAILS: NBU 921-25O4BS  
 GL 4955' & RKB 14'  
 @ 4969.00ft (ASSUMED)

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
0.00	0.00	14530654.85	2060621.93	40° 0' 10.609 N	109° 29' 58.362 W



WELLBORE TARGET DETAILS (MAP CO-ORDINATES AND LAT/LONG)

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Shape
PBHL	9516.00	-671.58	943.9714529999.25	2061577.07	40° 0' 3.971 N	109° 29' 46.230 W	Circle (Radius: 25.00)	



SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect	Target
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2	300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00	
3	1300.00	20.00	125.43	1279.82	-100.15	140.78	2.00	125.43	172.77	
4	3676.93	20.00	125.43	3513.40	-571.43	803.20	0.00	0.00	985.73	
5	4676.93	0.00	0.00	4493.22	-671.58	943.97	2.00	180.00	1158.50	
6	9699.72	0.00	0.00	9516.00	-671.58	943.97	0.00	0.00	1158.50	NBU 921-25O4BS PBHL

FORMATION TOP DETAILS

TVDPath	MDPath	Formation
1370.00	1395.97	GREEN RIVER
4626.00	4809.72	WASATCH
8210.00	8393.72	MESAVERDE

PROJECT DETAILS: Uintah County, UT UTM12

Geodetic System: Universal Transverse Mercator (US Survey Feet)  
 Datum: NAD 1927 - Western US  
 Ellipsoid: Clarke 1866  
 Zone: Zone 12N (114 W to 108 W)  
 Location: SEC 25 T9S R21E  
 System Datum: Mean Sea Level  
 Local North: True



# **Kerr McGee Oil and Gas Onshore LP**

**Uintah County, UT UTM12**

**NBU 921-25N Pad**

**NBU 921-25O4BS**

**OH**

**Plan: Plan #1**

## **Standard Planning Report**

**31 July, 2010**



<b>Database:</b>	EDM5000-RobertS-Local	<b>Local Co-ordinate Reference:</b>	Well NBU 921-25O4BS
<b>Company:</b>	Kerr McGee Oil and Gas Onshore LP	<b>TVD Reference:</b>	GL 4955' & RKB 14' @ 4969.00ft (ASSUMED)
<b>Project:</b>	Uintah County, UT UTM12	<b>MD Reference:</b>	GL 4955' & RKB 14' @ 4969.00ft (ASSUMED)
<b>Site:</b>	NBU 921-25N Pad	<b>North Reference:</b>	True
<b>Well:</b>	NBU 921-25O4BS	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	OH		
<b>Design:</b>	Plan #1		

<b>Project</b>	Uintah County, UT UTM12		
<b>Map System:</b>	Universal Transverse Mercator (US Survey Feet)	<b>System Datum:</b>	Mean Sea Level
<b>Geo Datum:</b>	NAD 1927 - Western US		
<b>Map Zone:</b>	Zone 12N (114 W to 108 W)		

<b>Site</b>	NBU 921-25N Pad, SEC 25 T9S R21E		
<b>Site Position:</b>		<b>Northing:</b>	14,530,655.41 usft
<b>From:</b>	Lat/Long	<b>Easting:</b>	2,060,612.11 usft
<b>Position Uncertainty:</b>	0.00 ft	<b>Slot Radius:</b>	13.200 in
		<b>Latitude:</b>	40° 0' 10.616 N
		<b>Longitude:</b>	109° 29' 58.488 W
		<b>Grid Convergence:</b>	0.96 °

<b>Well</b>	NBU 921-25O4BS, 1156' FSL 2595' FWL		
<b>Well Position</b>	<b>+N/-S</b>	-0.73 ft	<b>Northing:</b> 14,530,654.85 usft
	<b>+E/-W</b>	9.80 ft	<b>Easting:</b> 2,060,621.92 usft
<b>Position Uncertainty</b>	0.00 ft	<b>Wellhead Elevation:</b>	<b>Latitude:</b> 40° 0' 10.609 N
			<b>Longitude:</b> 109° 29' 58.362 W
			<b>Ground Level:</b> 4,955.00 ft

<b>Wellbore</b>	OH				
<b>Magnetics</b>	<b>Model Name</b>	<b>Sample Date</b>	<b>Declination (°)</b>	<b>Dip Angle (°)</b>	<b>Field Strength (nT)</b>
	IGRF2010	07/31/2010	11.19	65.89	52,418

<b>Design</b>	Plan #1			
<b>Audit Notes:</b>				
<b>Version:</b>	<b>Phase:</b>	PLAN	<b>Tie On Depth:</b>	0.00
<b>Vertical Section:</b>	<b>Depth From (TVD) (ft)</b>	<b>+N/-S (ft)</b>	<b>+E/-W (ft)</b>	<b>Direction (°)</b>
	0.00	0.00	0.00	125.43

<b>Plan Sections</b>										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	TFO (°)	Target
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,300.00	20.00	125.43	1,279.82	-100.15	140.78	2.00	2.00	0.00	125.43	
3,676.93	20.00	125.43	3,513.40	-571.43	803.20	0.00	0.00	0.00	0.00	
4,676.93	0.00	0.00	4,493.22	-671.58	943.97	2.00	-2.00	0.00	180.00	
9,699.72	0.00	0.00	9,516.00	-671.58	943.97	0.00	0.00	0.00	0.00	NBU 921-25O4BS PE

<b>Database:</b>	EDM5000-RobertS-Local	<b>Local Co-ordinate Reference:</b>	Well NBU 921-25O4BS
<b>Company:</b>	Kerr McGee Oil and Gas Onshore LP	<b>TVD Reference:</b>	GL 4955' & RKB 14' @ 4969.00ft (ASSUMED)
<b>Project:</b>	Uintah County, UT UTM12	<b>MD Reference:</b>	GL 4955' & RKB 14' @ 4969.00ft (ASSUMED)
<b>Site:</b>	NBU 921-25N Pad	<b>North Reference:</b>	True
<b>Well:</b>	NBU 921-25O4BS	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	OH		
<b>Design:</b>	Plan #1		

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
100.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00
200.00	0.00	0.00	200.00	0.00	0.00	0.00	0.00	0.00	0.00
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Start Build 2.00</b>									
400.00	2.00	125.43	399.98	-1.01	1.42	1.75	2.00	2.00	0.00
500.00	4.00	125.43	499.84	-4.05	5.69	6.98	2.00	2.00	0.00
600.00	6.00	125.43	599.45	-9.10	12.79	15.69	2.00	2.00	0.00
700.00	8.00	125.43	698.70	-16.16	22.72	27.88	2.00	2.00	0.00
800.00	10.00	125.43	797.47	-25.23	35.46	43.52	2.00	2.00	0.00
900.00	12.00	125.43	895.62	-36.29	51.01	62.60	2.00	2.00	0.00
1,000.00	14.00	125.43	993.06	-49.33	69.34	85.10	2.00	2.00	0.00
1,100.00	16.00	125.43	1,089.64	-64.33	90.43	110.98	2.00	2.00	0.00
1,200.00	18.00	125.43	1,185.27	-81.28	114.25	140.21	2.00	2.00	0.00
1,300.00	20.00	125.43	1,279.82	-100.15	140.78	172.77	2.00	2.00	0.00
<b>Start 2376.93 hold at 1300.00 MD</b>									
1,395.97	20.00	125.43	1,370.00	-119.18	167.52	205.59	0.00	0.00	0.00
<b>GREEN RIVER</b>									
1,400.00	20.00	125.43	1,373.78	-119.98	168.64	206.97	0.00	0.00	0.00
1,500.00	20.00	125.43	1,467.75	-139.81	196.51	241.17	0.00	0.00	0.00
1,600.00	20.00	125.43	1,561.72	-159.64	224.38	275.37	0.00	0.00	0.00
1,700.00	20.00	125.43	1,655.69	-179.46	252.25	309.58	0.00	0.00	0.00
1,800.00	20.00	125.43	1,749.66	-199.29	280.12	343.78	0.00	0.00	0.00
1,900.00	20.00	125.43	1,843.63	-219.12	307.99	377.98	0.00	0.00	0.00
2,000.00	20.00	125.43	1,937.60	-238.94	335.86	412.18	0.00	0.00	0.00
2,100.00	20.00	125.43	2,031.57	-258.77	363.73	446.38	0.00	0.00	0.00
2,200.00	20.00	125.43	2,125.54	-278.60	391.59	480.59	0.00	0.00	0.00
2,300.00	20.00	125.43	2,219.51	-298.42	419.46	514.79	0.00	0.00	0.00
2,385.66	20.00	125.43	2,300.00	-315.41	443.34	544.08	0.00	0.00	0.00
<b>8 5/8"</b>									
2,400.00	20.00	125.43	2,313.48	-318.25	447.33	548.99	0.00	0.00	0.00
2,500.00	20.00	125.43	2,407.45	-338.08	475.20	583.19	0.00	0.00	0.00
2,600.00	20.00	125.43	2,501.42	-357.91	503.07	617.39	0.00	0.00	0.00
2,700.00	20.00	125.43	2,595.39	-377.73	530.94	651.60	0.00	0.00	0.00
2,800.00	20.00	125.43	2,689.35	-397.56	558.81	685.80	0.00	0.00	0.00
2,900.00	20.00	125.43	2,783.32	-417.39	586.68	720.00	0.00	0.00	0.00
3,000.00	20.00	125.43	2,877.29	-437.21	614.54	754.20	0.00	0.00	0.00
3,100.00	20.00	125.43	2,971.26	-457.04	642.41	788.40	0.00	0.00	0.00
3,200.00	20.00	125.43	3,065.23	-476.87	670.28	822.61	0.00	0.00	0.00
3,300.00	20.00	125.43	3,159.20	-496.69	698.15	856.81	0.00	0.00	0.00
3,400.00	20.00	125.43	3,253.17	-516.52	726.02	891.01	0.00	0.00	0.00
3,500.00	20.00	125.43	3,347.14	-536.35	753.89	925.21	0.00	0.00	0.00
3,600.00	20.00	125.43	3,441.11	-556.18	781.76	959.41	0.00	0.00	0.00
3,676.93	20.00	125.43	3,513.40	-571.43	803.20	985.73	0.00	0.00	0.00
<b>Start Drop -2.00</b>									
3,700.00	19.54	125.43	3,535.11	-575.95	809.55	993.53	2.00	-2.00	0.00
3,800.00	17.54	125.43	3,629.92	-594.38	835.46	1,025.32	2.00	-2.00	0.00
3,900.00	15.54	125.43	3,725.77	-610.88	858.65	1,053.79	2.00	-2.00	0.00
4,000.00	13.54	125.43	3,822.57	-625.44	879.11	1,078.89	2.00	-2.00	0.00
4,100.00	11.54	125.43	3,920.18	-638.02	896.80	1,100.60	2.00	-2.00	0.00
4,200.00	9.54	125.43	4,018.48	-648.62	911.70	1,118.89	2.00	-2.00	0.00

<b>Database:</b>	EDM5000-RobertS-Local	<b>Local Co-ordinate Reference:</b>	Well NBU 921-25O4BS
<b>Company:</b>	Kerr McGee Oil and Gas Onshore LP	<b>TVD Reference:</b>	GL 4955' & RKB 14' @ 4969.00ft (ASSUMED)
<b>Project:</b>	Uintah County, UT UTM12	<b>MD Reference:</b>	GL 4955' & RKB 14' @ 4969.00ft (ASSUMED)
<b>Site:</b>	NBU 921-25N Pad	<b>North Reference:</b>	True
<b>Well:</b>	NBU 921-25O4BS	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	OH		
<b>Design:</b>	Plan #1		

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
4,300.00	7.54	125.43	4,117.37	-657.23	923.80	1,133.73	2.00	-2.00	0.00
4,400.00	5.54	125.43	4,216.72	-663.83	933.08	1,145.12	2.00	-2.00	0.00
4,500.00	3.54	125.43	4,316.40	-668.42	939.52	1,153.03	2.00	-2.00	0.00
4,600.00	1.54	125.43	4,416.29	-670.99	943.13	1,157.46	2.00	-2.00	0.00
4,676.93	0.00	0.00	4,493.22	-671.58	943.97	1,158.50	2.00	-2.00	0.00
Start 5022.78 hold at 4676.93 MD									
4,700.00	0.00	0.00	4,516.28	-671.58	943.97	1,158.50	0.00	0.00	0.00
4,800.00	0.00	0.00	4,616.28	-671.58	943.97	1,158.50	0.00	0.00	0.00
4,809.72	0.00	0.00	4,626.00	-671.58	943.97	1,158.50	0.00	0.00	0.00
WASATCH									
4,900.00	0.00	0.00	4,716.28	-671.58	943.97	1,158.50	0.00	0.00	0.00
5,000.00	0.00	0.00	4,816.28	-671.58	943.97	1,158.50	0.00	0.00	0.00
5,100.00	0.00	0.00	4,916.28	-671.58	943.97	1,158.50	0.00	0.00	0.00
5,200.00	0.00	0.00	5,016.28	-671.58	943.97	1,158.50	0.00	0.00	0.00
5,300.00	0.00	0.00	5,116.28	-671.58	943.97	1,158.50	0.00	0.00	0.00
5,400.00	0.00	0.00	5,216.28	-671.58	943.97	1,158.50	0.00	0.00	0.00
5,500.00	0.00	0.00	5,316.28	-671.58	943.97	1,158.50	0.00	0.00	0.00
5,600.00	0.00	0.00	5,416.28	-671.58	943.97	1,158.50	0.00	0.00	0.00
5,700.00	0.00	0.00	5,516.28	-671.58	943.97	1,158.50	0.00	0.00	0.00
5,800.00	0.00	0.00	5,616.28	-671.58	943.97	1,158.50	0.00	0.00	0.00
5,900.00	0.00	0.00	5,716.28	-671.58	943.97	1,158.50	0.00	0.00	0.00
6,000.00	0.00	0.00	5,816.28	-671.58	943.97	1,158.50	0.00	0.00	0.00
6,100.00	0.00	0.00	5,916.28	-671.58	943.97	1,158.50	0.00	0.00	0.00
6,200.00	0.00	0.00	6,016.28	-671.58	943.97	1,158.50	0.00	0.00	0.00
6,300.00	0.00	0.00	6,116.28	-671.58	943.97	1,158.50	0.00	0.00	0.00
6,400.00	0.00	0.00	6,216.28	-671.58	943.97	1,158.50	0.00	0.00	0.00
6,500.00	0.00	0.00	6,316.28	-671.58	943.97	1,158.50	0.00	0.00	0.00
6,600.00	0.00	0.00	6,416.28	-671.58	943.97	1,158.50	0.00	0.00	0.00
6,700.00	0.00	0.00	6,516.28	-671.58	943.97	1,158.50	0.00	0.00	0.00
6,800.00	0.00	0.00	6,616.28	-671.58	943.97	1,158.50	0.00	0.00	0.00
6,900.00	0.00	0.00	6,716.28	-671.58	943.97	1,158.50	0.00	0.00	0.00
7,000.00	0.00	0.00	6,816.28	-671.58	943.97	1,158.50	0.00	0.00	0.00
7,100.00	0.00	0.00	6,916.28	-671.58	943.97	1,158.50	0.00	0.00	0.00
7,200.00	0.00	0.00	7,016.28	-671.58	943.97	1,158.50	0.00	0.00	0.00
7,300.00	0.00	0.00	7,116.28	-671.58	943.97	1,158.50	0.00	0.00	0.00
7,400.00	0.00	0.00	7,216.28	-671.58	943.97	1,158.50	0.00	0.00	0.00
7,500.00	0.00	0.00	7,316.28	-671.58	943.97	1,158.50	0.00	0.00	0.00
7,600.00	0.00	0.00	7,416.28	-671.58	943.97	1,158.50	0.00	0.00	0.00
7,700.00	0.00	0.00	7,516.28	-671.58	943.97	1,158.50	0.00	0.00	0.00
7,800.00	0.00	0.00	7,616.28	-671.58	943.97	1,158.50	0.00	0.00	0.00
7,900.00	0.00	0.00	7,716.28	-671.58	943.97	1,158.50	0.00	0.00	0.00
8,000.00	0.00	0.00	7,816.28	-671.58	943.97	1,158.50	0.00	0.00	0.00
8,100.00	0.00	0.00	7,916.28	-671.58	943.97	1,158.50	0.00	0.00	0.00
8,200.00	0.00	0.00	8,016.28	-671.58	943.97	1,158.50	0.00	0.00	0.00
8,300.00	0.00	0.00	8,116.28	-671.58	943.97	1,158.50	0.00	0.00	0.00
8,393.72	0.00	0.00	8,210.00	-671.58	943.97	1,158.50	0.00	0.00	0.00
MESAVERDE									
8,400.00	0.00	0.00	8,216.28	-671.58	943.97	1,158.50	0.00	0.00	0.00
8,500.00	0.00	0.00	8,316.28	-671.58	943.97	1,158.50	0.00	0.00	0.00
8,600.00	0.00	0.00	8,416.28	-671.58	943.97	1,158.50	0.00	0.00	0.00
8,700.00	0.00	0.00	8,516.28	-671.58	943.97	1,158.50	0.00	0.00	0.00
8,800.00	0.00	0.00	8,616.28	-671.58	943.97	1,158.50	0.00	0.00	0.00



<b>Database:</b>	EDM5000-RobertS-Local	<b>Local Co-ordinate Reference:</b>	Well NBU 921-25O4BS
<b>Company:</b>	Kerr McGee Oil and Gas Onshore LP	<b>TVD Reference:</b>	GL 4955' & RKB 14' @ 4969.00ft (ASSUMED)
<b>Project:</b>	Uintah County, UT UTM12	<b>MD Reference:</b>	GL 4955' & RKB 14' @ 4969.00ft (ASSUMED)
<b>Site:</b>	NBU 921-25N Pad	<b>North Reference:</b>	True
<b>Well:</b>	NBU 921-25O4BS	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	OH		
<b>Design:</b>	Plan #1		

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
8,900.00	0.00	0.00	8,716.28	-671.58	943.97	1,158.50	0.00	0.00	0.00
9,000.00	0.00	0.00	8,816.28	-671.58	943.97	1,158.50	0.00	0.00	0.00
9,100.00	0.00	0.00	8,916.28	-671.58	943.97	1,158.50	0.00	0.00	0.00
9,200.00	0.00	0.00	9,016.28	-671.58	943.97	1,158.50	0.00	0.00	0.00
9,300.00	0.00	0.00	9,116.28	-671.58	943.97	1,158.50	0.00	0.00	0.00
9,400.00	0.00	0.00	9,216.28	-671.58	943.97	1,158.50	0.00	0.00	0.00
9,500.00	0.00	0.00	9,316.28	-671.58	943.97	1,158.50	0.00	0.00	0.00
9,600.00	0.00	0.00	9,416.28	-671.58	943.97	1,158.50	0.00	0.00	0.00
9,699.72	0.00	0.00	9,516.00	-671.58	943.97	1,158.50	0.00	0.00	0.00
TD at 9699.72 - NBU 921-25O4BS PBHL									

Design Targets									
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (usft)	Easting (usft)	Latitude	Longitude
- hit/miss target									
- Shape									
NBU 921-25O4BS PBHL	0.00	0.00	9,516.00	-671.58	943.97	14,529,999.26	2,061,577.07	40° 0' 3.971 N	109° 29' 46.230 W
- plan hits target center									
- Circle (radius 25.00)									

Casing Points					
Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (in)	Hole Diameter (in)	
2,385.66	2,300.00	8 5/8"	8.625	11.000	

Formations					
Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)
1,395.97	1,370.00	GREEN RIVER			
4,809.72	4,626.00	WASATCH			
8,393.72	8,210.00	MESAVERDE			

Plan Annotations				
Measured Depth (ft)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Comment
300.00	300.00	0.00	0.00	Start Build 2.00
1,300.00	1,279.82	-100.15	140.78	Start 2376.93 hold at 1300.00 MD
3,676.93	3,513.40	-571.43	803.20	Start Drop -2.00
4,676.93	4,493.22	-671.58	943.97	Start 5022.78 hold at 4676.93 MD
9,699.72	9,516.00	-671.58	943.97	TD at 9699.72

# **Kerr McGee Oil and Gas Onshore LP**

**Uintah County, UT UTM12**

**NBU 921-25N Pad**

**NBU 921-25O4BS**

**OH**

**Plan: Plan #1**

## **Standard Planning Report - Geographic**

**31 July, 2010**

<b>Database:</b>	EDM5000-RobertS-Local	<b>Local Co-ordinate Reference:</b>	Well NBU 921-25O4BS
<b>Company:</b>	Kerr McGee Oil and Gas Onshore LP	<b>TVD Reference:</b>	GL 4955' & RKB 14' @ 4969.00ft (ASSUMED)
<b>Project:</b>	Uintah County, UT UTM12	<b>MD Reference:</b>	GL 4955' & RKB 14' @ 4969.00ft (ASSUMED)
<b>Site:</b>	NBU 921-25N Pad	<b>North Reference:</b>	True
<b>Well:</b>	NBU 921-25O4BS	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	OH		
<b>Design:</b>	Plan #1		

<b>Project</b>	Uintah County, UT UTM12		
<b>Map System:</b>	Universal Transverse Mercator (US Survey Feet)	<b>System Datum:</b>	Mean Sea Level
<b>Geo Datum:</b>	NAD 1927 - Western US		
<b>Map Zone:</b>	Zone 12N (114 W to 108 W)		

<b>Site</b>	NBU 921-25N Pad, SEC 25 T9S R21E		
<b>Site Position:</b>		<b>Northing:</b>	14,530,655.41 usft
<b>From:</b>	Lat/Long	<b>Easting:</b>	2,060,612.11 usft
<b>Position Uncertainty:</b>	0.00 ft	<b>Slot Radius:</b>	13.200 in
		<b>Latitude:</b>	40° 0' 10.616 N
		<b>Longitude:</b>	109° 29' 58.488 W
		<b>Grid Convergence:</b>	0.96 °

<b>Well</b>	NBU 921-25O4BS, 1156' FSL 2595' FWL		
<b>Well Position</b>	<b>+N/-S</b>	0.00 ft	<b>Northing:</b> 14,530,654.85 usft
	<b>+E/-W</b>	0.00 ft	<b>Easting:</b> 2,060,621.92 usft
<b>Position Uncertainty</b>	0.00 ft	<b>Wellhead Elevation:</b>	<b>Latitude:</b> 40° 0' 10.609 N
			<b>Longitude:</b> 109° 29' 58.362 W
			<b>Ground Level:</b> 4,955.00 ft

<b>Wellbore</b>	OH				
<b>Magnetics</b>	<b>Model Name</b>	<b>Sample Date</b>	<b>Declination (°)</b>	<b>Dip Angle (°)</b>	<b>Field Strength (nT)</b>
	IGRF2010	07/31/2010	11.19	65.89	52,418

<b>Design</b>	Plan #1			
<b>Audit Notes:</b>				
<b>Version:</b>	<b>Phase:</b>	PLAN	<b>Tie On Depth:</b>	0.00
<b>Vertical Section:</b>	<b>Depth From (TVD) (ft)</b>	<b>+N/-S (ft)</b>	<b>+E/-W (ft)</b>	<b>Direction (°)</b>
	0.00	0.00	0.00	125.43

<b>Plan Sections</b>										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	TFO (°)	Target
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,300.00	20.00	125.43	1,279.82	-100.15	140.78	2.00	2.00	0.00	125.43	
3,676.93	20.00	125.43	3,513.40	-571.43	803.20	0.00	0.00	0.00	0.00	
4,676.93	0.00	0.00	4,493.22	-671.58	943.97	2.00	-2.00	0.00	180.00	
9,699.72	0.00	0.00	9,516.00	-671.58	943.97	0.00	0.00	0.00	0.00	NBU 921-25O4BS PE

<b>Database:</b>	EDM5000-RobertS-Local	<b>Local Co-ordinate Reference:</b>	Well NBU 921-25O4BS
<b>Company:</b>	Kerr McGee Oil and Gas Onshore LP	<b>TVD Reference:</b>	GL 4955' & RKB 14' @ 4969.00ft (ASSUMED)
<b>Project:</b>	Uintah County, UT UTM12	<b>MD Reference:</b>	GL 4955' & RKB 14' @ 4969.00ft (ASSUMED)
<b>Site:</b>	NBU 921-25N Pad	<b>North Reference:</b>	True
<b>Well:</b>	NBU 921-25O4BS	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	OH		
<b>Design:</b>	Plan #1		

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
0.00	0.00	0.00	0.00	0.00	0.00	14,530,654.85	2,060,621.92	40° 0' 10.609 N	109° 29' 58.362 W
100.00	0.00	0.00	100.00	0.00	0.00	14,530,654.85	2,060,621.92	40° 0' 10.609 N	109° 29' 58.362 W
200.00	0.00	0.00	200.00	0.00	0.00	14,530,654.85	2,060,621.92	40° 0' 10.609 N	109° 29' 58.362 W
300.00	0.00	0.00	300.00	0.00	0.00	14,530,654.85	2,060,621.92	40° 0' 10.609 N	109° 29' 58.362 W
<b>Start Build 2.00</b>									
400.00	2.00	125.43	399.98	-1.01	1.42	14,530,653.86	2,060,623.36	40° 0' 10.599 N	109° 29' 58.344 W
500.00	4.00	125.43	499.84	-4.05	5.69	14,530,650.90	2,060,627.68	40° 0' 10.569 N	109° 29' 58.289 W
600.00	6.00	125.43	599.45	-9.10	12.79	14,530,645.97	2,060,634.86	40° 0' 10.519 N	109° 29' 58.198 W
700.00	8.00	125.43	698.70	-16.16	22.72	14,530,639.07	2,060,644.91	40° 0' 10.449 N	109° 29' 58.070 W
800.00	10.00	125.43	797.47	-25.23	35.46	14,530,630.22	2,060,657.81	40° 0' 10.360 N	109° 29' 57.906 W
900.00	12.00	125.43	895.62	-36.29	51.01	14,530,619.42	2,060,673.54	40° 0' 10.250 N	109° 29' 57.706 W
1,000.00	14.00	125.43	993.06	-49.33	69.34	14,530,606.69	2,060,692.08	40° 0' 10.122 N	109° 29' 57.471 W
1,100.00	16.00	125.43	1,089.64	-64.33	90.43	14,530,592.05	2,060,713.42	40° 0' 9.973 N	109° 29' 57.200 W
1,200.00	18.00	125.43	1,185.27	-81.28	114.25	14,530,575.50	2,060,737.53	40° 0' 9.806 N	109° 29' 56.894 W
1,300.00	20.00	125.43	1,279.82	-100.15	140.78	14,530,557.08	2,060,764.37	40° 0' 9.619 N	109° 29' 56.553 W
<b>Start 2376.93 hold at 1300.00 MD</b>									
1,395.97	20.00	125.43	1,370.00	-119.18	167.52	14,530,538.51	2,060,791.43	40° 0' 9.431 N	109° 29' 56.209 W
<b>GREEN RIVER</b>									
1,400.00	20.00	125.43	1,373.78	-119.98	168.64	14,530,537.73	2,060,792.56	40° 0' 9.423 N	109° 29' 56.195 W
1,500.00	20.00	125.43	1,467.75	-139.81	196.51	14,530,518.37	2,060,820.76	40° 0' 9.227 N	109° 29' 55.836 W
1,600.00	20.00	125.43	1,561.72	-159.64	224.38	14,530,499.02	2,060,848.96	40° 0' 9.031 N	109° 29' 55.478 W
1,700.00	20.00	125.43	1,655.69	-179.46	252.25	14,530,479.66	2,060,877.16	40° 0' 8.835 N	109° 29' 55.120 W
1,800.00	20.00	125.43	1,749.66	-199.29	280.12	14,530,460.31	2,060,905.36	40° 0' 8.639 N	109° 29' 54.762 W
1,900.00	20.00	125.43	1,843.63	-219.12	307.99	14,530,440.95	2,060,933.56	40° 0' 8.443 N	109° 29' 54.404 W
2,000.00	20.00	125.43	1,937.60	-238.94	335.86	14,530,421.60	2,060,961.76	40° 0' 8.247 N	109° 29' 54.045 W
2,100.00	20.00	125.43	2,031.57	-258.77	363.73	14,530,402.24	2,060,989.95	40° 0' 8.051 N	109° 29' 53.687 W
2,200.00	20.00	125.43	2,125.54	-278.60	391.59	14,530,382.89	2,061,018.15	40° 0' 7.855 N	109° 29' 53.329 W
2,300.00	20.00	125.43	2,219.51	-298.42	419.46	14,530,363.53	2,061,046.35	40° 0' 7.659 N	109° 29' 52.971 W
2,385.66	20.00	125.43	2,300.00	-315.41	443.34	14,530,346.95	2,061,070.51	40° 0' 7.492 N	109° 29' 52.664 W
<b>8 5/8"</b>									
2,400.00	20.00	125.43	2,313.48	-318.25	447.33	14,530,344.18	2,061,074.55	40° 0' 7.463 N	109° 29' 52.613 W
2,500.00	20.00	125.43	2,407.45	-338.08	475.20	14,530,324.82	2,061,102.75	40° 0' 7.267 N	109° 29' 52.255 W
2,600.00	20.00	125.43	2,501.42	-357.91	503.07	14,530,305.47	2,061,130.95	40° 0' 7.071 N	109° 29' 51.896 W
2,700.00	20.00	125.43	2,595.39	-377.73	530.94	14,530,286.11	2,061,159.15	40° 0' 6.875 N	109° 29' 51.538 W
2,800.00	20.00	125.43	2,689.35	-397.56	558.81	14,530,266.76	2,061,187.34	40° 0' 6.679 N	109° 29' 51.180 W
2,900.00	20.00	125.43	2,783.32	-417.39	586.68	14,530,247.40	2,061,215.54	40° 0' 6.484 N	109° 29' 50.822 W
3,000.00	20.00	125.43	2,877.29	-437.21	614.54	14,530,228.05	2,061,243.74	40° 0' 6.288 N	109° 29' 50.464 W
3,100.00	20.00	125.43	2,971.26	-457.04	642.41	14,530,208.69	2,061,271.94	40° 0' 6.092 N	109° 29' 50.106 W
3,200.00	20.00	125.43	3,065.23	-476.87	670.28	14,530,189.34	2,061,300.14	40° 0' 5.896 N	109° 29' 49.747 W
3,300.00	20.00	125.43	3,159.20	-496.69	698.15	14,530,169.98	2,061,328.34	40° 0' 5.700 N	109° 29' 49.389 W
3,400.00	20.00	125.43	3,253.17	-516.52	726.02	14,530,150.63	2,061,356.54	40° 0' 5.504 N	109° 29' 49.031 W
3,500.00	20.00	125.43	3,347.14	-536.35	753.89	14,530,131.27	2,061,384.73	40° 0' 5.308 N	109° 29' 48.673 W
3,600.00	20.00	125.43	3,441.11	-556.18	781.76	14,530,111.92	2,061,412.93	40° 0' 5.112 N	109° 29' 48.315 W
3,676.93	20.00	125.43	3,513.40	-571.43	803.20	14,530,097.03	2,061,434.63	40° 0' 4.961 N	109° 29' 48.039 W
<b>Start Drop -2.00</b>									
3,700.00	19.54	125.43	3,535.11	-575.95	809.55	14,530,092.61	2,061,441.06	40° 0' 4.916 N	109° 29' 47.958 W
3,800.00	17.54	125.43	3,629.92	-594.38	835.46	14,530,074.62	2,061,467.27	40° 0' 4.734 N	109° 29' 47.625 W
3,900.00	15.54	125.43	3,725.77	-610.88	858.65	14,530,058.51	2,061,490.74	40° 0' 4.571 N	109° 29' 47.326 W
4,000.00	13.54	125.43	3,822.57	-625.44	879.11	14,530,044.31	2,061,511.44	40° 0' 4.427 N	109° 29' 47.064 W
4,100.00	11.54	125.43	3,920.18	-638.02	896.80	14,530,032.02	2,061,529.33	40° 0' 4.303 N	109° 29' 46.836 W
4,200.00	9.54	125.43	4,018.48	-648.62	911.70	14,530,021.67	2,061,544.41	40° 0' 4.198 N	109° 29' 46.645 W
4,300.00	7.54	125.43	4,117.37	-657.23	923.80	14,530,013.27	2,061,556.65	40° 0' 4.113 N	109° 29' 46.489 W

<b>Database:</b>	EDM5000-RobertS-Local	<b>Local Co-ordinate Reference:</b>	Well NBU 921-25O4BS
<b>Company:</b>	Kerr McGee Oil and Gas Onshore LP	<b>TVD Reference:</b>	GL 4955' & RKB 14' @ 4969.00ft (ASSUMED)
<b>Project:</b>	Uintah County, UT UTM12	<b>MD Reference:</b>	GL 4955' & RKB 14' @ 4969.00ft (ASSUMED)
<b>Site:</b>	NBU 921-25N Pad	<b>North Reference:</b>	True
<b>Well:</b>	NBU 921-25O4BS	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	OH		
<b>Design:</b>	Plan #1		

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
4,400.00	5.54	125.43	4,216.72	-663.83	933.08	14,530,006.83	2,061,566.04	40° 0' 4.047 N	109° 29' 46.370 W
4,500.00	3.54	125.43	4,316.40	-668.42	939.52	14,530,002.35	2,061,572.57	40° 0' 4.002 N	109° 29' 46.287 W
4,600.00	1.54	125.43	4,416.29	-670.99	943.13	14,529,999.84	2,061,576.22	40° 0' 3.977 N	109° 29' 46.241 W
4,676.93	0.00	0.00	4,493.22	-671.58	943.97	14,529,999.26	2,061,577.07	40° 0' 3.971 N	109° 29' 46.230 W
<b>Start 5022.78 hold at 4676.93 MD</b>									
4,700.00	0.00	0.00	4,516.28	-671.58	943.97	14,529,999.26	2,061,577.07	40° 0' 3.971 N	109° 29' 46.230 W
4,800.00	0.00	0.00	4,616.28	-671.58	943.97	14,529,999.26	2,061,577.07	40° 0' 3.971 N	109° 29' 46.230 W
4,809.72	0.00	0.00	4,626.00	-671.58	943.97	14,529,999.26	2,061,577.07	40° 0' 3.971 N	109° 29' 46.230 W
<b>WASATCH</b>									
4,900.00	0.00	0.00	4,716.28	-671.58	943.97	14,529,999.26	2,061,577.07	40° 0' 3.971 N	109° 29' 46.230 W
5,000.00	0.00	0.00	4,816.28	-671.58	943.97	14,529,999.26	2,061,577.07	40° 0' 3.971 N	109° 29' 46.230 W
5,100.00	0.00	0.00	4,916.28	-671.58	943.97	14,529,999.26	2,061,577.07	40° 0' 3.971 N	109° 29' 46.230 W
5,200.00	0.00	0.00	5,016.28	-671.58	943.97	14,529,999.26	2,061,577.07	40° 0' 3.971 N	109° 29' 46.230 W
5,300.00	0.00	0.00	5,116.28	-671.58	943.97	14,529,999.26	2,061,577.07	40° 0' 3.971 N	109° 29' 46.230 W
5,400.00	0.00	0.00	5,216.28	-671.58	943.97	14,529,999.26	2,061,577.07	40° 0' 3.971 N	109° 29' 46.230 W
5,500.00	0.00	0.00	5,316.28	-671.58	943.97	14,529,999.26	2,061,577.07	40° 0' 3.971 N	109° 29' 46.230 W
5,600.00	0.00	0.00	5,416.28	-671.58	943.97	14,529,999.26	2,061,577.07	40° 0' 3.971 N	109° 29' 46.230 W
5,700.00	0.00	0.00	5,516.28	-671.58	943.97	14,529,999.26	2,061,577.07	40° 0' 3.971 N	109° 29' 46.230 W
5,800.00	0.00	0.00	5,616.28	-671.58	943.97	14,529,999.26	2,061,577.07	40° 0' 3.971 N	109° 29' 46.230 W
5,900.00	0.00	0.00	5,716.28	-671.58	943.97	14,529,999.26	2,061,577.07	40° 0' 3.971 N	109° 29' 46.230 W
6,000.00	0.00	0.00	5,816.28	-671.58	943.97	14,529,999.26	2,061,577.07	40° 0' 3.971 N	109° 29' 46.230 W
6,100.00	0.00	0.00	5,916.28	-671.58	943.97	14,529,999.26	2,061,577.07	40° 0' 3.971 N	109° 29' 46.230 W
6,200.00	0.00	0.00	6,016.28	-671.58	943.97	14,529,999.26	2,061,577.07	40° 0' 3.971 N	109° 29' 46.230 W
6,300.00	0.00	0.00	6,116.28	-671.58	943.97	14,529,999.26	2,061,577.07	40° 0' 3.971 N	109° 29' 46.230 W
6,400.00	0.00	0.00	6,216.28	-671.58	943.97	14,529,999.26	2,061,577.07	40° 0' 3.971 N	109° 29' 46.230 W
6,500.00	0.00	0.00	6,316.28	-671.58	943.97	14,529,999.26	2,061,577.07	40° 0' 3.971 N	109° 29' 46.230 W
6,600.00	0.00	0.00	6,416.28	-671.58	943.97	14,529,999.26	2,061,577.07	40° 0' 3.971 N	109° 29' 46.230 W
6,700.00	0.00	0.00	6,516.28	-671.58	943.97	14,529,999.26	2,061,577.07	40° 0' 3.971 N	109° 29' 46.230 W
6,800.00	0.00	0.00	6,616.28	-671.58	943.97	14,529,999.26	2,061,577.07	40° 0' 3.971 N	109° 29' 46.230 W
6,900.00	0.00	0.00	6,716.28	-671.58	943.97	14,529,999.26	2,061,577.07	40° 0' 3.971 N	109° 29' 46.230 W
7,000.00	0.00	0.00	6,816.28	-671.58	943.97	14,529,999.26	2,061,577.07	40° 0' 3.971 N	109° 29' 46.230 W
7,100.00	0.00	0.00	6,916.28	-671.58	943.97	14,529,999.26	2,061,577.07	40° 0' 3.971 N	109° 29' 46.230 W
7,200.00	0.00	0.00	7,016.28	-671.58	943.97	14,529,999.26	2,061,577.07	40° 0' 3.971 N	109° 29' 46.230 W
7,300.00	0.00	0.00	7,116.28	-671.58	943.97	14,529,999.26	2,061,577.07	40° 0' 3.971 N	109° 29' 46.230 W
7,400.00	0.00	0.00	7,216.28	-671.58	943.97	14,529,999.26	2,061,577.07	40° 0' 3.971 N	109° 29' 46.230 W
7,500.00	0.00	0.00	7,316.28	-671.58	943.97	14,529,999.26	2,061,577.07	40° 0' 3.971 N	109° 29' 46.230 W
7,600.00	0.00	0.00	7,416.28	-671.58	943.97	14,529,999.26	2,061,577.07	40° 0' 3.971 N	109° 29' 46.230 W
7,700.00	0.00	0.00	7,516.28	-671.58	943.97	14,529,999.26	2,061,577.07	40° 0' 3.971 N	109° 29' 46.230 W
7,800.00	0.00	0.00	7,616.28	-671.58	943.97	14,529,999.26	2,061,577.07	40° 0' 3.971 N	109° 29' 46.230 W
7,900.00	0.00	0.00	7,716.28	-671.58	943.97	14,529,999.26	2,061,577.07	40° 0' 3.971 N	109° 29' 46.230 W
8,000.00	0.00	0.00	7,816.28	-671.58	943.97	14,529,999.26	2,061,577.07	40° 0' 3.971 N	109° 29' 46.230 W
8,100.00	0.00	0.00	7,916.28	-671.58	943.97	14,529,999.26	2,061,577.07	40° 0' 3.971 N	109° 29' 46.230 W
8,200.00	0.00	0.00	8,016.28	-671.58	943.97	14,529,999.26	2,061,577.07	40° 0' 3.971 N	109° 29' 46.230 W
8,300.00	0.00	0.00	8,116.28	-671.58	943.97	14,529,999.26	2,061,577.07	40° 0' 3.971 N	109° 29' 46.230 W
8,393.72	0.00	0.00	8,210.00	-671.58	943.97	14,529,999.26	2,061,577.07	40° 0' 3.971 N	109° 29' 46.230 W
<b>MESAVERDE</b>									
8,400.00	0.00	0.00	8,216.28	-671.58	943.97	14,529,999.26	2,061,577.07	40° 0' 3.971 N	109° 29' 46.230 W
8,500.00	0.00	0.00	8,316.28	-671.58	943.97	14,529,999.26	2,061,577.07	40° 0' 3.971 N	109° 29' 46.230 W
8,600.00	0.00	0.00	8,416.28	-671.58	943.97	14,529,999.26	2,061,577.07	40° 0' 3.971 N	109° 29' 46.230 W
8,700.00	0.00	0.00	8,516.28	-671.58	943.97	14,529,999.26	2,061,577.07	40° 0' 3.971 N	109° 29' 46.230 W
8,800.00	0.00	0.00	8,616.28	-671.58	943.97	14,529,999.26	2,061,577.07	40° 0' 3.971 N	109° 29' 46.230 W
8,900.00	0.00	0.00	8,716.28	-671.58	943.97	14,529,999.26	2,061,577.07	40° 0' 3.971 N	109° 29' 46.230 W

<b>Database:</b>	EDM5000-RobertS-Local	<b>Local Co-ordinate Reference:</b>	Well NBU 921-25O4BS
<b>Company:</b>	Kerr McGee Oil and Gas Onshore LP	<b>TVD Reference:</b>	GL 4955' & RKB 14' @ 4969.00ft (ASSUMED)
<b>Project:</b>	Uintah County, UT UTM12	<b>MD Reference:</b>	GL 4955' & RKB 14' @ 4969.00ft (ASSUMED)
<b>Site:</b>	NBU 921-25N Pad	<b>North Reference:</b>	True
<b>Well:</b>	NBU 921-25O4BS	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	OH		
<b>Design:</b>	Plan #1		

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
9,000.00	0.00	0.00	8,816.28	-671.58	943.97	14,529,999.26	2,061,577.07	40° 0' 3.971 N	109° 29' 46.230 W
9,100.00	0.00	0.00	8,916.28	-671.58	943.97	14,529,999.26	2,061,577.07	40° 0' 3.971 N	109° 29' 46.230 W
9,200.00	0.00	0.00	9,016.28	-671.58	943.97	14,529,999.26	2,061,577.07	40° 0' 3.971 N	109° 29' 46.230 W
9,300.00	0.00	0.00	9,116.28	-671.58	943.97	14,529,999.26	2,061,577.07	40° 0' 3.971 N	109° 29' 46.230 W
9,400.00	0.00	0.00	9,216.28	-671.58	943.97	14,529,999.26	2,061,577.07	40° 0' 3.971 N	109° 29' 46.230 W
9,500.00	0.00	0.00	9,316.28	-671.58	943.97	14,529,999.26	2,061,577.07	40° 0' 3.971 N	109° 29' 46.230 W
9,600.00	0.00	0.00	9,416.28	-671.58	943.97	14,529,999.26	2,061,577.07	40° 0' 3.971 N	109° 29' 46.230 W
9,699.72	0.00	0.00	9,516.00	-671.58	943.97	14,529,999.26	2,061,577.07	40° 0' 3.971 N	109° 29' 46.230 W
TD at 9699.72 - NBU 921-25O4BS PBHL									

Design Targets									
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (usft)	Easting (usft)	Latitude	Longitude
- hit/miss target									
- Shape									
NBU 921-25O4BS PBHL	0.00	0.00	9,516.00	-671.58	943.97	14,529,999.26	2,061,577.07	40° 0' 3.971 N	109° 29' 46.230 W
- plan hits target center									
- Circle (radius 25.00)									

Casing Points					
Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (in)	Hole Diameter (in)	
2,385.66	2,300.00	8 5/8"	8.625	11.000	

Formations					
Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)
1,395.97	1,370.00	GREEN RIVER			
4,809.72	4,626.00	WASATCH			
8,393.72	8,210.00	MESAVERDE			

Plan Annotations				
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment
		+N/-S (ft)	+E/-W (ft)	
300.00	300.00	0.00	0.00	Start Build 2.00
1,300.00	1,279.82	-100.15	140.78	Start 2376.93 hold at 1300.00 MD
3,676.93	3,513.40	-571.43	803.20	Start Drop -2.00
4,676.93	4,493.22	-671.58	943.97	Start 5022.78 hold at 4676.93 MD
9,699.72	9,516.00	-671.58	943.97	TD at 9699.72

**NBU 921-25K4CS**

Surface: 1,157' FSL 2,585' FWL (SE/4SW/4)  
BHL: 1,450' FSL 2,045' FWL (NE/4SW/4)  
Mineral Lease: UO 1194 ST

**NBU 921-25N2DS**

Surface: 1,159' FSL 2,565' FWL (SE/4SW/4)  
BHL: 800' FSL 1,896' FWL (SE/4SW/4)  
Mineral Lease: UO 1194 ST

**NBU 921-25N3AS**

Surface: 1,158' FSL 2,575' FWL (SE/4SW/4)  
BHL: 508' FSL 1,729' FWL (SE/4SW/4)  
Mineral Lease: UO 1194 ST

**NBU 921-25O4BS**

Surface: 1,156' FSL 2,595' FWL (SE/4SW/4)  
BHL: 485' FSL 1,741' FEL (SW/4SE/4)  
Mineral Lease: UO 4139 ST

Pad: NBU 921-25N  
Section 25 T9S R21E

Uintah County, Utah  
Operator: Kerr-McGee Oil & Gas Onshore LP

***MULTI-POINT SURFACE USE PLAN of OPERATIONS (SUPO)***

This SUPO contains surface operating procedures for Kerr-McGee Oil & Gas Onshore LP (KMG), a wholly owned subsidiary of Anadarko Petroleum Corporation (APC) pertaining to actions that involve the State of Utah School and Institutional Trust Lands Administration (SITLA) in the development of minerals leased to APC/KMG (including, but not limited to, APDs/SULAs/ROEs/ROWs and/or easements).

See associated Utah Division of Oil, Gas, and Mining (UDOGM) Form 3(s), plats, maps, and other attachments for site-specific information on projects represented herein.

In accordance with Utah Oil & Gas Conservation Rule R649-3-11 pertaining to Directional Drilling, these wells will be directionally drilled. Refer to Topo Map A for directions to the location and Topo Maps A and B for location of access roads within a 2-mile radius.

**A. Existing Roads:**

Existing roads consist of county roads and improved/unimproved lease roads. APC/KMG will maintain existing roads in a condition that is the same as or better than before operations began and in a safe and usable condition. Maintenance of existing roads will continue until final abandonment and reclamation of well pads and/or other facilities. The road maintenance may include, but is not limited to, blading, ditching, culvert installation/cleanout, surfacing, and dust control.

Typically, roads, gathering lines and electrical distribution lines will occupy common disturbance corridors and roadways will be used as working space. All disturbances located in the same corridor will overlap each other to the maximum extent possible; in no case will the maximum disturbance width of the access road and utility corridors exceed 50', unless otherwise approved.

**B. Planned Access Roads:**

Approximately  $\pm 290'$  (0.1 miles) of new road re-route to this pad location is proposed (see Topo Map B). Applicable Uintah County encroachment and/or pipeline crossing permits will be obtained prior to construction/development. No other pipelines will be crossed at this location.

Where roads are new or to be reconstructed, they will be located, designed, and maintained to meet the standards of SITLA and other commonly accepted Best Management Practices (BMPs). If a new road/corridor were to cross a water of the United States, KMG will adhere to the requirements of applicable Nationwide or Individual Permits of the Department of Army Corps of Engineers.

Turnouts; major cut and fills; culverts; bridges; gates; cattle guards; low water crossings; or modifications needed to existing infrastructure/facilities were determined at the on-site and, as applicable, are typically shown on attached Exhibits and Topo maps.

**C. Location of Existing and Proposed Facilities:**

This pad will expand the existing pad for the NBU 921-25NT, which is a vertical producing well according to Utah Division of Oil, Gas and Mining (UDOGM) records as of August 12, 2010.

Production facilities (see Well Pad Design Summary and Facilities Diagram):

Production facilities will be installed on the disturbed portion of each well pad and may include bermed components (typically excluding dehy's and/or separators) that contain fluids (i.e. production tanks, produced liquids tanks). The berms will be constructed of compacted subsoil or corrugated metal, impervious, designed to hold 110% of the capacity of the largest tank, and be independent of the back cut. All permanent (on-site six months or longer) aboveground structures constructed or installed, including pumping units, will be painted a flat, non-reflective, earth-tone color chosen at the onsite in coordination with SITLA.

Production tanks will be constructed, maintained, and operated to prevent unauthorized surface or subsurface discharges of liquids and to prevent livestock or wildlife entry. The tanks are not to be used for disposal of liquids from additional sources without prior approval of UDOGM.

Gathering facilities:

The following pipeline transmission facilities will apply if the well is productive (see Topo D):

The total gas gathering (steel line pipe with fusion bond epoxy coating) pipeline distances from the meter to the tie in point is  $\pm 1,210'$  and the individual segments are broken up as follows:

$\pm 250'$  (0.1 miles) – New 6" buried gas pipeline from the meter to the NBU 921-25J pad intersection.



±490' (0.1 miles) –New 10" buried gas pipeline from the NBU 921-25J pad intersection to the edge of the pad.

±470' (0.1 miles) –New 10" buried gas pipeline from the edge of the pad to the existing 12' gas pipeline tie in point.

The total liquid gathering pipeline distance from the meter to the tie in point is ±1,590' and the individual segments are broken up as follows:

±250' (0.1 miles) –New 4" buried liquid pipeline from the meter to the NBU 921-25J pad intersection.

±490' (0.1 miles) –New 4" buried liquid pipeline from the NBU 921-25J pad intersection to the edge of the pad.

±430' (0.1 miles) –New 4" buried liquid pipeline from the edge of the pad to the NBU 921-25J2 pad intersection.

±420' (0.1 miles) –New 6" buried liquid pipeline from the NBU 921-25J2 pad intersection to the NBU 921-25K pad intersection.

The liquid gathering lines will be made of polyethylene or a composite polyethylene/steel or polyethylene/fiberglass that is not subject to internal or external pipe corrosion. The content of the produced fluids to be transferred by the liquid gathering system will be approximately 92% produced water and 8% condensate. Trunk line valve connections for the water gathering system will be below ground but accessible from the surface in order to prevent freezing during winter time.

The proposed pipelines will be buried and will include gas gathering and liquid gathering pipelines in the same trench. Where the pipeline is adjacent to the road or well pad, the road and/or well pad will be utilized for construction activities and staging. Kerr-McGee requests a permanent 30' right-of-way adjacent to the road for life-of-project for maintenance, repairs, and/or upgrades, no additional right-of-way will be needed beyond the 30'. Where the pipeline is not adjacent to the road or well pad, Kerr-McGee requests a temporary 45' construction right-of-way and 30' permanent right-of-way.

The proposed trench width for the pipeline would range from 18-48 inches and will be excavated to a depth of 48 to 60 inches of normal soil cover or 24 inches of cover in consolidated rock. During construction blasting may occur along the proposed right-of-way where trenching equipment cannot cut into the bedrock. Large debris and rocks removed from the earth during trenching and blasting that could not be returned to the trench would be distributed evenly and naturally in the project area. The proposed pipelines will be pressure tested pneumatically (depending on size) or with fluids (either fresh or produced). If fluids are used, there will be no discharge to the surface.

Pipeline signs will be installed along the right-of-way to indicate the pipeline proximity, ownership, and to provide emergency contact phone numbers. Above ground valves, T's, and/or cathodic protection will be installed at various locations for connection, corrosion prevention and/or for safety purposes.

**D. Location and Type of Water Supply:**

Water for drilling purposes will be obtained from one of the following sources:

- Dalbo Inc.'s underground well located in Ouray, Utah, Sec. 32 T4S R3E, Water User Claim number 43-8496, application number 53617.
- Price Water Pumping Inc. Green River and White River, various sources, Water Right Number 49-1659, application number: a35745.

Water will be hauled to location over the roads marked on Maps A and B.

No water well is to be drilled on this lease.

**E. Source of Construction Materials:**

Construction operations will typically be completed with native materials found on location. If needed, construction materials that must be imported to the site (mineral material aggregate, soils or materials suitable for fill/surfacing) will be obtained from a nearby permitted source and described in subsequent Sundry requests. No construction materials will be removed from State lands without prior approval from SITLA.

**F. Methods of Handling Waste Materials:**

Should the well be productive, produced water will be contained in a water tank and will be transported by pipeline and/or truck to an approved disposal sites facilities and/or Salt Water Disposal (SWD) injection well.

Currently, those facilities are:

RNI in Sec. 5 T9S R22E  
 Ace Oilfield in Sec. 2 T6S R20E  
 MC&MC in Sec. 12 T6S R19E  
 Pipeline Facility in Sec. 36 T9S R20E  
 Goat Pasture Evaporation Pond in SW/4 Sec. 16 T10S R22E  
 Bonanza Evaporation Pond in Sec. 2 T10S R23E  
 Ouray #1 SWD in Sec. 1 T9S R21E  
 NBU 159 SWD in Sec. 35 T9S R21E  
 CIGE 112D SWD in Sec. 19 T9S R21E  
 CIGE 114 SWD in Sec. 34 T9S R21E  
 NBU 921-34K SWD in Sec. 34 T9S R21E  
 NBU 921-33F SWD in Sec. 33 T9S R21E  
 NBU 921-34L SWD in Sec. 34 T9S R21E

Drill cuttings and/or fluids will be contained in the reserve/frac pit. Cuttings will be buried in pit(s) upon closure. Unless otherwise approved, no oil or other oil-based drilling additives, chromium/metals-based, or saline muds will be used during drilling. Only fresh water (as specified above), biodegradable polymer soap, bentonite clay, and/or non-toxic additives will be used in the mud system.

Pits will be constructed to minimize the accumulation of surface runoff. Should fluid hydrocarbons be encountered during drilling, completions or well testing, product will either be contained in test tanks on the well site or evacuated by vacuum trucks and transported to an approved disposal/sales facility. Should petroleum hydrocarbons unexpectedly be released into a pit, they will be removed as soon as practical but in no case will they remain longer than 72 hours unless an alternate is approved by SITLA. Should timely removal prove infeasible, the pit will be netted with mesh no larger than 1 inch until such time as hydrocarbons can be removed. Hydrocarbon removal will also take place prior to the closure of the pit, unless authorization is provided for disposal via alternative pit closure methods (e.g. solidification).

The reserve and/or fracture stimulation pit will be lined with a synthetic material 20-mil or thicker. The liner will be installed over smooth fill subgrade that is free of pockets, loose rocks, or other materials (i.e. sand, sifted dirt, bentonite, straw, etc.) that could damage the liner. Any additional pits necessary to subsequent operations, such as temporary flare or workover pits, will be contained within the originally approved well pad and disturbance boundaries. Such temporary pits will be backfilled and reclaimed within 180 days of completion of work at a well location.

For the protection of livestock and wildlife, all open pits and cellars will be fenced/covered to prevent wildlife or livestock entry. Total height of pit fencing will be at least 42 inches and corner posts will be cemented and/or braced in such a manner as to keep the fence tight at all times. Standard steel, wood, or pipe posts shall be used between the corner braces. Maximum distance between any 2 fence posts shall be no greater than 16 feet.

Pits containing drilling cuttings, mud, and/or completions fluids will be allowed to dry. Any free fluids remaining after six (6) months from reaching total depth, date of completion, and/or determination of inactivity will be removed (as weather conditions allow) to an approved site and the pit reclaimed. Additional drying methods may include fly-ash solidification or sprinkler evaporation. Installation and operation of any sprinklers, pumps, and equipment will ensure that water spray or mist does not drift. Reserve pit liners will be cut off or folded as near to the mud surface as possible and as safety considerations allow and buried on location.

No garbage or non-exempt substances as defined by Resource Conservation and Recovery Act (RCRA) subtitle C will be placed in the reserve pit. All refuse generated during construction, drilling, completion, and well testing activities will be contained in an enclosed receptacle, removed from the drill locations promptly, and transported to an approved disposal facility.

Portable, self-contained chemical toilets and/or sewage processing facilities will be provided for human waste disposal. Upon completion of operations, or as required, the toilet holding tanks will be pumped and the contents disposed of in an approved sewage disposal facility. All applicable regulations pertaining to disposal of human and solid waste will be observed.

Any undesirable event, accidental release, or in excess of reportable quantities will be managed according to the notification requirements of UDOGMs "Reporting Oil and Gas Undesirable Events" rule, and, where State wells are participatory to a Federal agreement, according to NTL-3A.

**Materials Management**

Hazardous materials above reportable quantities will not be produced by drilling or completing proposed wells or constructing the pipelines/facilities. The term “hazardous materials” as used here means: (1) any substance, pollutant, or containment listed as hazardous under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) of 1980, as amended 42 U.S.C. 9601 et seq., and the regulations issued under CERCLA; and (2) any hazardous waste as defined in RCRA of 1976, as amended. In addition, no extremely hazardous substance, as defined in 40 CFR 355, in threshold planning quantities, would be used, produced, stored, transported, or disposed of while producing any well.

Chemicals subject to reporting under Title III of the Superfund Amendments and Reauthorization Act (SARA) in quantities of 10,000 pounds or more may be produced and/or stored at production facilities and may be kept in limited quantities on drilling sites and well locations for short periods of time during drilling or completion activities.

**G. Ancillary Facilities:**

None are anticipated.

**H. Well Site Layout (see Well Pad Design Summary):**

The location, orientation and aerial extent of each drill pad; reserve/completion/flare pit; access road ingress/egress points, drilling rig, dikes/ditches, existing wells/infrastructure; proposed cuts and fills; and topsoil and spoil material stockpile locations are depicted on the exhibits for each project, where applicable. Site-specific conditions may require slight deviation in actual equipment and facility layout; however, the area of disturbance, as described in the survey, will not be exceeded.

Coordinates are provided in the National Spatial Reference System, North American Datum, 1983 (NAD83) or latest edition. Distances are depicted on each plat to the nearest two adjacent section lines.

**I. Plans for Reclamation of the Surface:**

Surface reclamation will be undertaken in two phases: interim and final. Interim reclamation is conducted following well completion and extends through the period of production. This reclamation is for the area of the well pad that is not required for production activities. Final reclamation is conducted following well plugging/conversion and/or facility abandonment processes.

Reclamation activities in both phases may include but are not limited to: re-contouring or re-configuration of topographic surfaces, restoration of drainage systems, segregation of spoils materials, minimizing surface disturbance, re-evaluating backfill requirements, pit closure, topsoil redistribution, soil treatments, seeding and weed control.

**Interim Reclamation**

Interim reclamation includes pit closure, re-contouring (where possible), soil bed preparation, topsoil placement, seeding, and/or weed control.

Interim re-contouring involves bringing all construction material from cuts and fills back onto the well pad and site and reestablishing the natural contours where desirable and practical. Fill and stockpiled spoils no longer necessary to the operation will be spread on the cut slopes and covered with stockpiled topsoil. All stockpiled top soils will be used for interim reclamation where practical to maintain soil viability. Where possible, the land surface will be left “rough” after re-contouring to ensure that the maximum surface area will be available to support the reestablishment of vegetative cover.

A reserve pit, upon being allowed to dry, will be backfilled and compacted with cover materials that are void of any topsoil, vegetation, large stones, rocks or foreign objects. Soils that are moisture laden, saturated, or partially/completely frozen will not be used for backfill or cover. The pit area will be mounded to allow for settling and to promote positive surface drainage away from the pit.

**Final Reclamation**

Final reclamation will be performed for newly drilled unproductive wells and/or at the end of the life of a productive well. As soon as practical after the conclusion of drilling and testing operations, unproductive drill holes will be plugged and abandoned (P&A). Site and road reclamation will commence following plugging. In no case will reclamation at non-producing locations be initiated later than six (6) months from the date a well is plugged. A joint inspection of the disturbed area to be reclaimed may be requested by APC/KMG. The primary purpose of this inspection will be to review the existing conditions, or agree upon a revised final reclamation and abandonment plan. A Notice of Intent to Abandon will be filed for final recommendations regarding surface reclamation.

After plugging, all wellhead equipment that is no longer needed will be removed, and the well site will be reclaimed. Final contouring will blend with and follow as closely as practical the natural terrain and contours of the original site and surrounding areas. After re-contouring, final grading will be conducted over the entire surface of the well site and access road. Where practical, the area will be ripped to a depth of 18 to 24 inches on 18 to 24-inch centers and surface materials will be pitted with small depressions to form longitudinal depressions 12 to 18 inches deep perpendicular to the natural flow of water.

All unnecessary surface equipment and structures (e.g. cattle guards) and water control structures (e.g. culverts, drainage pipes) not needed to facilitate successful reclamation will be removed during final reclamation. Roads that will be reclaimed will be ripped to a depth of 18 inches where practical, re-contoured to approximate the original contour of the ground and seeded.

Upon successfully completing reclamation of a P&A location, a Final Abandonment Notice will be submitted to UDOGM.

**Seeding and Measures Common to Interim and Final Reclamation**

Reclaimed areas may be fenced to exclude grazing and encourage re-vegetation.

On slopes where severe erosion can become a problem and the use of machinery is not practical, seed will be hand broadcast and raked with twice the specified amount of seed. The slope will be stabilized using materials specifically designed to prevent erosion on steep slopes and hold seed in place so vegetation can become permanently established. These materials will include, but are not limited to, erosion control blankets and bonded fiber matrix at a rate to achieve a minimum of 80 percent soil coverage.

Seeding will occur year-round as conditions allow. Seed mixes appropriate to the native plant community as determined and specified for each project location based on the site specific soils will be used for re-vegetation. The site specific seed mix will be provided by SITLA.

**J. Surface/Mineral Ownership:**

SITLA  
675 East 500 South, Suite 500  
Salt Lake City, UT 84102

**K. Other Information:**

A Class I literature survey has been conducted by Montgomery Archaeological Consultants, Inc. (MOAC). For additional details please refer to report MOAC 10-125.

A paleontological reconnaissance has been completed by Intermountain Paleo-Consulting (IPC) and a report will be provided under separate cover.

A biological field survey was completed by Grasslands Consulting, Inc. on July 13, 2010. For additional details please refer to report GCI-294.



**M. Lessee's or Operators' Representative & Certification:**

Danielle Piernot  
Regulatory Analyst I  
Kerr-McGee Oil & Gas Onshore LP  
PO Box 173779  
Denver, CO 80217-3779  
(720) 929-6156

Tommy Thompson  
General Manager, Drilling  
Kerr-McGee Oil & Gas Onshore LP  
PO Box 173779  
Denver, CO 80217-3779  
(720) 929-6724

Certification: All lease and/or unit operations will be conducted in such a manner that full compliance is made with all applicable laws, regulations, Onshore Oil and Gas Orders, the approved Plan of Operations, and any applicable Notice to Lessees.

The Operator will be fully responsible for the actions of its subcontractors. A complete copy of the approved "Application for Permit to Drill" will be furnished to the field representative(s) to ensure compliance and shall be on location during all construction and drilling operations.

Kerr-McGee Oil & Gas Onshore LP is considered to be the operator of the subject well. Kerr-McGee Oil & Gas Onshore LP agrees to be responsible under terms and conditions of the lease for the operations conducted upon leased lands.

Bond coverage for State lease activities is provided by State Surety Bond 22013542, and for applicable Federal lease activities and pursuant to 43 CFR 3104, by Bureau of Land Management Nationwide Bond WYB000291.

I hereby certify that I, or persons under my supervision, have inspected the proposed drill site and access route, that I am familiar with the conditions that currently exist; that I have full knowledge of the State and Federal laws applicable to this operation; that the statements made in this plan are, to the best of my knowledge, true and correct; and the work associated with the operations proposed herein will be performed in conformity with this APD package and the terms and conditions under which it is approved. I also certify that I, or the company I represent, am responsible for operations conducted under this application. These statements are subject to the provisions of 18 U.S.C. 1001 for the filing of false statements.

  
Danielle Piernot

August 13, 2010  
Date

CLASS I REVIEW OF KERR-MCGEE OIL AND GAS  
ONSHORE LP'S 36 PROPOSED WELL LOCATIONS  
IN T9S, R21E, SECTION 25  
(MOAC Report No. 10-125)  
UINTAH COUNTY, UTAH

By:

Nicole Shelnut

Prepared For:

State of Utah  
School and Institutional Trust Lands Administration

Prepared Under Contract With:

Kerr-McGee Oil and Gas Onshore LP  
1368 South 1200 East  
Vernal, Utah 84078

Prepared By:

Montgomery Archaeological Consultants, Inc.  
P.O. Box 219  
Moab, Utah 84532

MOAC Report No. 10-125

July 26, 2010

State of Utah Public Lands Policy Coordination Office  
Permit No. 117

United States Department of Interior (FLPMA)  
Permit No. 10-UT-60122



# Grasslands Consulting, Inc.

4800 Happy Canyon Road, Suite 110, Denver, CO 80237

(303) 759-5377 Office (303) 759-5324 Fax

## **SPECIAL STATUS PLANT AND WILDLIFE SPECIES REPORT**

**Report Number:** GCI #294

**Report Date:** August 03, 2010

**Operator:** Kerr-McGee Oil & Gas Onshore LP

**Well:** NBU 921-25N well pad (Bores: NBU 921-25K4CS, NBU 921-25N2DS, NBU 921-25N3AS, & NBU 921-25O4BS)

**Pipeline:** Associated pipeline leading to proposed well pad

**Access Road:** Associated road leading to proposed well pad

**Location:** Section 25, Township 9 South, Range 21 East; Uintah County, Utah

**Survey-Species:** Uinta Basin Hookless Cactus (*Sclerocactus wetlandicus*)

**Survey Date:** July 13, 2010

**Observers:** Grasslands Consulting, Inc. Biologists: Brad Snopek, Jennie Sinclair, Jonathan Sexauer, Adrienne Cunningham, Garrett Peterson and field technicians.



Kerr-McGee Oil & Gas Onshore LP  
PO Box 173779  
DENVER, CO 80217-3779

July 15, 2010

Ms. Diana Mason  
Division of Oil, Gas and Mining  
P.O. Box 145801  
Salt Lake City, UT 84114-6100

Re: Directional Drilling R649-3-11  
NBU 921-25O4BS  
T9S-R21E  
Section 25: SESW surface, SWSE bottom hole  
Surface: 1156' FSL, 2595' FWL  
Bottom Hole: 485' FSL, 1741' FEL  
Uintah County, Utah

Dear Ms. Mason:

Pursuant to the filing of Kerr-McGee Oil & Gas Onshore LP's (Kerr-McGee) Application for Permit to Drill regarding the above referenced well, we are hereby submitting this letter in accordance with Oil & Gas Conservation Rule R649-3-11 pertaining to Directional Drilling.

- Kerr-McGee's NBU 921-25O4BS is located within the Natural Buttes Unit area.
- Kerr-McGee is permitting this well as a directional well in order to minimize surface disturbance. Locating the well at the surface location and directionally drilling from this location, Kerr-McGee will be able to utilize the existing road and pipelines in the area.
- Furthermore, Kerr-McGee certifies that it is the sole working interest owner within 460 feet of the entire directional well bore.

Therefore, based on the above stated information, Kerr-McGee Oil & Gas Onshore LP requests the permit be granted pursuant to R649-3-11.

Sincerely,

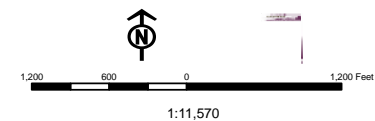
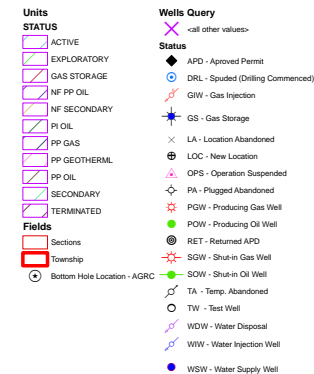
KERR-MCGEE OIL & GAS ONSHORE LP

A handwritten signature in blue ink, appearing to read 'Joe Matney'.

Joe Matney  
Sr. Staff Landman

'APIWellNo:43047512640000'

Map Produced by Diana Mason



**From:** Jim Davis  
**To:** Bonner, Ed; Garrison, LaVonne; Hill, Brad; Mason, Diana  
**CC:** Bartlett, Floyd; Laura.Gianakos@anadarko.com; Piernot, Danielle; Upch...  
**Date:** 9/2/2010 9:13 AM  
**Subject:** SITLA approval of Kerr McGee wells  
**Attachments:** KMG approvals and paleo 9.1.2010.xlsx

The following wells have been approved by SITLA including arch clearance. Paleo clearance is also granted with stipulations as noted.

Full Paleo monitoring: All ground-disturbing activities must be monitored by a permitted paleontologist.

NBU 922-29F4DS [API #4304751207]	Full Monitoring	IPC 10-08
NBU 922-29G4CS [API #4304751208]	Full Monitoring	IPC 10-08
NBU 922-29J4BS [API #4304751209]	Full Monitoring	IPC 10-08
NBU 922-29K1DS [API #4304751210]	Full Monitoring	IPC 10-08
NBU 922-29G1AS [API #4304751194]	Full Monitoring	IPC 10-06
NBU 922-29G1DS [API #4304751195]	Full Monitoring	IPC 10-06
NBU 922-29G2BS [API #4304751196]	Full Monitoring	IPC 10-06
NBU 922-29G3BS [API #4304751197]	Full Monitoring	IPC 10-06
NBU 921-25A3DS [API 4304751248]	Full Monitoring	IPC 10-21
NBU 921-25G1CS [API 4304751249]	Full Monitoring	IPC 10-21
NBU 921-25G2AS [API 4304751250]	Full Monitoring	IPC 10-21
NBU 921-25H2AS [API 4304751252]	Full Monitoring	IPC 10-21
NBU 921-25H2DS [API 4304751253]	Full Monitoring	IPC 10-21
NBU 921-25G3AS [API 4304751274]	Full Monitoring	IPC 10-23
NBU 921-25G3CS [API 4304751275]	Full Monitoring	IPC 10-23
NBU 921-25J2CS [API 4304751276]	Full Monitoring	IPC 10-23
NBU 921-25K1CS [API 4304751277]	Full Monitoring	IPC 10-23
NBU 921-25A2AS [API 4304751237]	Full Monitoring	IPC 10-21
NBU 921-25B1CS [API 4304751238]	Full Monitoring	IPC 10-21

Spot Paleo Monitoring: All ground-disturbing activities must be monitored by a permitted paleontologist at the beginning of construction and thereafter spot-monitored as paleontological conditions merit.

NBU 921-25C1AS [API 4304751239]	Spot Monitoring	IPC 10-20
NBU 921-25D1BS [API 4304751240]	Spot Monitoring	IPC 10-20
NBU 921-25D1CS [API 4304751251]	Spot Monitoring	IPC 10-20
NBU 921-25E1CS [API 4304751241]	Spot Monitoring	IPC 10-20
NBU 921-25E3AS [API 4304751242]	Spot Monitoring	IPC 10-20
NBU 921-25F1BS [API 4304751243]	Spot Monitoring	IPC 10-21
NBU 921-25F1CS [API 4304751244]	Spot Monitoring	IPC 10-21
NBU 921-25F3AS [API 4304751245]	Spot Monitoring	IPC 10-21
NBU 921-25F3CS [API 4304751246]	Spot Monitoring	IPC 10-21
NBU 921-25L1BS [API 4304751247]	Spot Monitoring	IPC 10-21
NBU 921-25J1DS [API 4304751256]	Spot Monitoring	IPC 10-23
NBU 921-25J4AS [API 4304751254]	Spot Monitoring	IPC 10-23
NBU 921-25J4CS [API 4304751255]	Spot Monitoring	IPC 10-23
NBU 921-25K4BS [API 4304751257]	Spot Monitoring	IPC 10-22
NBU 921-25L2AS [API 4304751258]	Spot Monitoring	IPC 10-22
NBU 921-25L4AS [API 4304751259]	Spot Monitoring	IPC 10-22
NBU 921-25N2BS [API 4304751260]	Spot Monitoring	IPC 10-22
NBU 921-25K4CS [API 4304751261]	Spot Monitoring	IPC 10-23
NBU 921-25N2DS [API 4304751262]	Spot Monitoring	IPC 10-23
NBU 921-25N3AS [API 4304751263]	Spot Monitoring	IPC 10-23



NBU 921-25O4BS [API 4304751264]	Spot Monitoring	IPC 10-23	
NBU 921-25B3AS [API 4304751265]	Spot Monitoring	IPC 10-20	
NBU 921-25B3DS [API 4304751266]	Spot Monitoring	IPC 10-20	
NBU 921-25C2DS [API 4304751267]	Spot Monitoring	IPC 10-20	
NBU 921-25C3AS [API 4304751268]	Spot Monitoring	IPC 10-20	
NBU 921-25IT [API 4304751273]	Spot Monitoring	IPC 10-23	
NBU 921-25H3DS [API 4304751269]	Spot Monitoring	IPC 10-23	
NBU 921-25I2AS [API 4304751270]	Spot Monitoring	IPC 10-23	
NBU 921-25I4AS [API 4304751271]	Spot Monitoring	IPC 10-23	
NBU 921-25I4DS [API 4304751272]	Spot Monitoring	IPC 10-23	
NBU 922-29A1BS [API #4304751183]	Spot Monitoring	IPC 10-06	
NBU 922-29A1CS [API #4304751184]	Spot Monitoring	IPC 10-06	
NBU 922-29A4CS [API #4304751185]	Spot Monitoring	IPC 10-06	
NBU 922-29H1BS [API #4304751186]	Spot Monitoring	IPC 10-06	
NBU 922-29B2CS [API #4304751187]	Spot Monitoring	IPC 10-06	
NBU 922-29B4AS [API #4304751188]	Spot Monitoring	IPC 10-06	(SITLA surf/ Fed Min)
NBU 922-29C2AS [API #4304751189]	Spot Monitoring	IPC 10-06	(SITLA surf/ Fed Min)
NBU 922-29C4AS [API #4304751190]	Spot Monitoring	IPC 10-06	
NBU 922-29B1AS [API #4304751191]	Spot Monitoring	IPC 10-06	
NBU 922-29B1DS [API #4304751192]	Spot Monitoring	IPC 10-06	
NBU 922-29B2BS [API #4304751193]	Spot Monitoring	IPC 10-06	
NBU 922-29D4DS [API #4304751198]	Spot Monitoring	IPC 10-05	
NBU 922-29E3BS [API #4304751199]	Spot Monitoring	IPC 10-05	
NBU 922-29F3AS [API #4304751200]	Spot Monitoring	IPC 10-05	
NBU 922-29F3BS [API #4304751201]	Spot Monitoring	IPC 10-05	
NBU 922-29G4AS [API #4304751202]	Spot Monitoring	IPC 10-06	
NBU 922-29H1CS [API #4304751203]	Spot Monitoring	IPC 10-06	
NBU 922-29H4CS [API #4304751204]	Spot Monitoring	IPC 10-06	
NBU 922-29I1BS [API #4304751205]	Spot Monitoring	IPC 10-06	
NBU 922-29I1CS [API #4304751206]	Spot Monitoring	IPC 10-06	
NBU 922-29K2CS [API #4304751211]	Spot Monitoring	IPC 10-07	
NBU 922-29K4AS [API #4304751212]	Spot Monitoring	IPC 10-07	
NBU 922-29L1AS [API #4304751213]	Spot Monitoring	IPC 10-07	
NBU 922-29L2BS [API #4304751214]	Spot Monitoring	IPC 10-07	
NBU 922-29L2CS [API #4304751215]	Spot Monitoring	IPC 10-07	
NBU 922-29L3CS [API #4304751216]	Spot Monitoring	IPC 10-07	
NBU 922-29M2AS [API #4304751217]	Spot Monitoring	IPC 10-07	
NBU 922-29N2BS [API #4304751218]	Spot Monitoring	IPC 10-07	
NBU 922-29N3BS [API #4304751219]	Spot Monitoring	IPC 10-07	
NBU 922-30I4BS [API #4304751220]	Spot Monitoring	IPC 10-07	(SITLA surf/ Fed Min)
NBU 922-30I4CS [API #4304751221]	Spot Monitoring	IPC 10-07	(SITLA surf/Fed Min)
NBU 922-29J4CS [API #4304751222]	Spot Monitoring	IPC 10-08	
NBU 922-29N1BS [API #4304751223]	Spot Monitoring	IPC 10-08	
NBU 922-29O1CS [API #4304751224]	Spot Monitoring	IPC 10-08	

That's quite a list, so I'm attaching a quick-and-dirty spreadsheet of the same data. This may be helpful to some of you.

Thanks.

-Jim

'APIWellNo:43047512640000'

Jim Davis  
Utah Trust Lands Administration  
jimdavis1@utah.gov  
Phone: (801) 538-5156

Well Name	KERR-MCGEE OIL & GAS ONSHORE, L.P. NBU 921-2504BS 430475126			
String	Surf	Prod		
Casing Size(in)	8.625	4.500		
Setting Depth (TVD)	2300	9516		
Previous Shoe Setting Depth (TVD)	40	2300		
Max Mud Weight (ppg)	8.3	12.4		
BOPE Proposed (psi)	500	5000		
Casing Internal Yield (psi)	3390	7780		
Operators Max Anticipated Pressure (psi)	5995	12.1		

Calculations	Surf String	8.625	"
Max BHP (psi)	.052*Setting Depth*MW=	996	
			BOPE Adequate For Drilling And Setting Casing at Depth?
MASP (Gas) (psi)	Max BHP-(0.12*Setting Depth)=	720	NO <input type="text" value="air drill"/>
MASP (Gas/Mud) (psi)	Max BHP-(0.22*Setting Depth)=	490	YES <input type="text" value="OK"/>
			*Can Full Expected Pressure Be Held At Previous Shoe?
Pressure At Previous Shoe	Max BHP-.22*(Setting Depth - Previous Shoe Depth)=	499	NO <input type="text" value="Reasonable depth in area"/>
Required Casing/BOPE Test Pressure=		2300	psi
*Max Pressure Allowed @ Previous Casing Shoe=		40	psi *Assumes 1psi/ft frac gradient

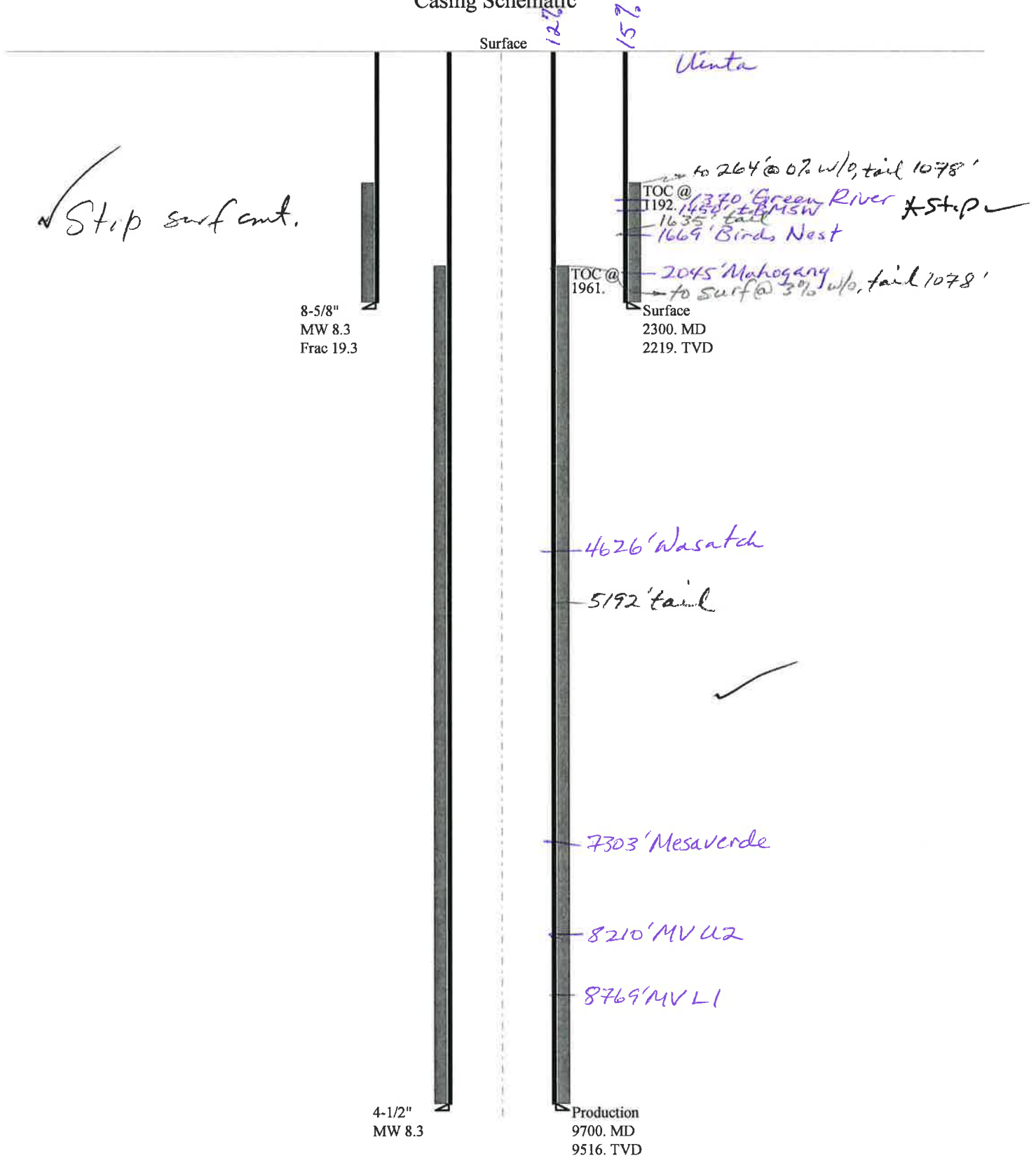
Calculations	Prod String	4.500	"
Max BHP (psi)	.052*Setting Depth*MW=	6136	
			BOPE Adequate For Drilling And Setting Casing at Depth?
MASP (Gas) (psi)	Max BHP-(0.12*Setting Depth)=	4994	YES <input type="text"/>
MASP (Gas/Mud) (psi)	Max BHP-(0.22*Setting Depth)=	4042	YES <input type="text" value="OK"/>
			*Can Full Expected Pressure Be Held At Previous Shoe?
Pressure At Previous Shoe	Max BHP-.22*(Setting Depth - Previous Shoe Depth)=	4548	NO <input type="text" value="Reasonable"/>
Required Casing/BOPE Test Pressure=		5000	psi
*Max Pressure Allowed @ Previous Casing Shoe=		2300	psi *Assumes 1psi/ft frac gradient

Calculations	String		"
Max BHP (psi)	.052*Setting Depth*MW=		
			BOPE Adequate For Drilling And Setting Casing at Depth?
MASP (Gas) (psi)	Max BHP-(0.12*Setting Depth)=		NO <input type="text"/>
MASP (Gas/Mud) (psi)	Max BHP-(0.22*Setting Depth)=		NO <input type="text"/>
			*Can Full Expected Pressure Be Held At Previous Shoe?
Pressure At Previous Shoe	Max BHP-.22*(Setting Depth - Previous Shoe Depth)=		NO <input type="text"/>
Required Casing/BOPE Test Pressure=			psi
*Max Pressure Allowed @ Previous Casing Shoe=			psi *Assumes 1psi/ft frac gradient

Calculations	String		"
Max BHP (psi)	.052*Setting Depth*MW=		
			BOPE Adequate For Drilling And Setting Casing at Depth?
MASP (Gas) (psi)	Max BHP-(0.12*Setting Depth)=		NO <input type="text"/>
MASP (Gas/Mud) (psi)	Max BHP-(0.22*Setting Depth)=		NO <input type="text"/>
			*Can Full Expected Pressure Be Held At Previous Shoe?
Pressure At Previous Shoe	Max BHP-.22*(Setting Depth - Previous Shoe Depth)=		NO <input type="text"/>
Required Casing/BOPE Test Pressure=			psi
*Max Pressure Allowed @ Previous Casing Shoe=			psi *Assumes 1psi/ft frac gradient

# 43047512640000 NBU 921-2504BS

## Casing Schematic



Well name:	<b>43047512640000 NBU 921-2504BS</b>		
Operator:	<b>KERR-MCGEE OIL &amp; GAS ONSHORE, L.P.</b>		
String type:	Surface	Project ID:	43-047-51264
Location:	UINTAH	COUNTY	

**Design parameters:****Collapse**

Mud weight: 8.330 ppg  
Design is based on evacuated pipe.

**Minimum design factors:****Collapse:**

Design factor 1.125

**Burst:**

Design factor 1.00

**Environment:**

H2S considered? No  
Surface temperature: 74 °F  
Bottom hole temperature: 105 °F  
Temperature gradient: 1.40 °F/100ft  
Minimum section length: 100 ft

Cement top: 1,192 ft

**Burst**

Max anticipated surface pressure: 1,953 psi  
Internal gradient: 0.120 psi/ft  
Calculated BHP 2,219 psi

No backup mud specified.

**Tension:**

8 Round STC: 1.80 (J)  
8 Round LTC: 1.70 (J)  
Buttress: 1.60 (J)  
Premium: 1.50 (J)  
Body yield: 1.50 (B)

Tension is based on air weight.  
Neutral point: 2,010 ft

**Directional Info - Build & Drop**

Kick-off point 300 ft  
Departure at shoe: 515 ft  
Maximum dogleg: 2 °/100ft  
Inclination at shoe: 20 °

**Re subsequent strings:**

Next setting depth: 9,516 ft  
Next mud weight: 12.400 ppg  
Next setting BHP: 6,130 psi  
Fracture mud wt: 19.250 ppg  
Fracture depth: 2,219 ft  
Injection pressure: 2,219 psi

Run Seq	Segment Length (ft)	Size (in)	Nominal Weight (lbs/ft)	Grade	End Finish	True Vert Depth (ft)	Measured Depth (ft)	Drift Diameter (in)	Est. Cost (\$)
1	2300	8.625	28.00	I-55	LT&C	2219	2300	7.892	91068
Run Seq	Collapse Load (psi)	Collapse Strength (psi)	Collapse Design Factor	Burst Load (psi)	Burst Strength (psi)	Burst Design Factor	Tension Load (kips)	Tension Strength (kips)	Tension Design Factor
1	960	1880	1.958	2219	3390	1.53	62.1	348	5.60 J

Prepared by: Helen Sadik-Macdonald  
Div of Oil, Gas & Mining

Phone: 801 538-5357  
FAX: 801-359-3940

Date: October 7, 2010  
Salt Lake City, Utah

**Remarks:**

Collapse is based on a vertical depth of 2219 ft, a mud weight of 8.33 ppg. The casing is considered to be evacuated for collapse purposes. Collapse strength is based on the Westcott, Dunlop & Kemler method of biaxial correction for tension.

Burst strength is not adjusted for tension.

Collapse strength is (biaxially) derated for doglegs in directional wells by multiplying the tensile stress by the cross section area to calculate a

*Engineering responsibility for use of this design will be that of the purchaser.*

Well name:	<b>43047512640000 NBU 921-2504BS</b>		
Operator:	<b>KERR-MCGEE OIL &amp; GAS ONSHORE, L.P.</b>		
String type:	Production	Project ID:	43-047-51264
Location:	UINTAH	COUNTY	

**Design parameters:****Collapse**

Mud weight: 12.400 ppg  
Internal fluid density: 2.330 ppg

**Minimum design factors:****Collapse:**

Design factor 1.125

**Burst:**

Design factor 1.00

**Environment:**

H2S considered? No  
Surface temperature: 74 °F  
Bottom hole temperature: 207 °F  
Temperature gradient: 1.40 °F/100ft  
Minimum section length: 100 ft

Cement top: 1,961 ft

**Burst**

Max anticipated surface pressure: 4,036 psi  
Internal gradient: 0.220 psi/ft  
Calculated BHP 6,130 psi

No backup mud specified.

**Tension:**

8 Round STC: 1.80 (J)  
8 Round LTC: 1.80 (J)  
Buttress: 1.60 (J)  
Premium: 1.50 (J)  
Body yield: 1.60 (B)

**Directional Info - Build & Drop**

Kick-off point 300 ft  
Departure at shoe: 1159 ft  
Maximum dogleg: 2 °/100ft  
Inclination at shoe: 0 °

Tension is based on air weight.

Neutral point: 7,936 ft

Run Seq	Segment Length (ft)	Size (in)	Nominal Weight (lbs/ft)	Grade	End Finish	True Vert Depth (ft)	Measured Depth (ft)	Drift Diameter (in)	Est. Cost (\$)
1	9700	4.5	11.60	I-80	LT&C	9516	9700	3.875	128039
Run Seq	Collapse Load (psi)	Collapse Strength (psi)	Collapse Design Factor	Burst Load (psi)	Burst Strength (psi)	Burst Design Factor	Tension Load (kips)	Tension Strength (kips)	Tension Design Factor
1	4978	6360	1.278	6130	7780	1.27	110.4	212	1.92 J

Prepared Helen Sadik-Macdonald  
by: Div of Oil, Gas & Mining

Phone: 801 538-5357  
FAX: 801-359-3940

Date: October 7, 2010  
Salt Lake City, Utah

**Remarks:**

Collapse is based on a vertical depth of 9516 ft, a mud weight of 12.4 ppg. An internal gradient of .121 psi/ft was used for collapse from TD. Collapse strength is based on the Westcott, Dunlop & Kemler method of biaxial correction for tension.

Burst strength is not adjusted for tension.

Collapse strength is (biaxially) derated for doglegs in directional wells by multiplying the tensile stress by the cross section area to calculate a

*Engineering responsibility for use of this design will be that of the purchaser.*



# United States Department of the Interior

## BUREAU OF LAND MANAGEMENT

Utah State Office

P.O. Box 45155

Salt Lake City, Utah 84145-0155

IN REPLY REFER TO:

3160

(UT-922)

August 17, 2010

Memorandum

To: Assistant District Manager Minerals, Vernal District

From: Michael Coulthard, Petroleum Engineer

Subject: 2010 Plan of Development Natural Buttes Unit  
Uintah County, Utah.

Pursuant to email between Diana Whitney, Division of Oil, Gas and Mining, and Mickey Coulthard, Utah State Office, Bureau of Land Management, the following wells are planned for calendar year 2010 within the Natural Buttes Unit, Uintah County, Utah.

API #	WELL NAME	LOCATION
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(Proposed PZ WASATCH-MESA VERDE)

### NBU 921-25A Pad

43-047-51237	NBU 921-25A2AS	Sec 25 T09S R21E 0489 FNL 0565 FEL
	BHL	Sec 25 T09S R21E 0252 FNL 0865 FEL

43-047-51238	NBU 921-25B1CS	Sec 25 T09S R21E 0489 FNL 0575 FEL
	BHL	Sec 25 T09S R21E 0416 FNL 1676 FEL

### NBU 921-25D Pad

43-047-51239	NBU 921-25C1AS	Sec 25 T09S R21E 0800 FNL 0893 FWL
	BHL	Sec 25 T09S R21E 0190 FNL 2405 FWL

43-047-51240	NBU 921-25D1BS	Sec 25 T09S R21E 0807 FNL 0885 FWL
	BHL	Sec 25 T09S R21E 0060 FNL 0716 FWL

43-047-51241	NBU 921-25E1CS	Sec 25 T09S R21E 0821 FNL 0871 FWL
	BHL	Sec 25 T09S R21E 1976 FNL 0947 FWL

43-047-51242	NBU 921-25E3AS	Sec 25 T09S R21E 0828 FNL 0864 FWL
	BHL	Sec 25 T09S R21E 2162 FNL 0371 FWL

43-047-51251	NBU 921-25D1CS	Sec 25 T09S R21E 0814 FNL 0878 FWL
	BHL	Sec 25 T09S R21E 0460 FNL 0726 FWL

API #	WELL NAME	LOCATION
(Proposed PZ WASATCH-MESA VERDE)		
<b>NBU 921-25F Pad</b>		
43-047-51243	NBU 921-25F1BS	Sec 25 T09S R21E 2580 FNL 1780 FWL
	BHL	Sec 25 T09S R21E 1366 FNL 2296 FWL
43-047-51244	NBU 921-25F1CS	Sec 25 T09S R21E 2571 FNL 1784 FWL
	BHL	Sec 25 T09S R21E 1754 FNL 2259 FWL
43-047-51245	NBU 921-25F3AS	Sec 25 T09S R21E 2589 FNL 1776 FWL
	BHL	Sec 25 T09S R21E 2034 FNL 1905 FWL
43-047-51246	NBU 921-25F3CS	Sec 25 T09S R21E 2598 FNL 1772 FWL
	BHL	Sec 25 T09S R21E 2461 FNL 1628 FWL
43-047-51247	NBU 921-25L1BS	Sec 25 T09S R21E 2607 FNL 1768 FWL
	BHL	Sec 25 T09S R21E 2597 FSL 0969 FWL
<b>NBU 921-25H Pad</b>		
43-047-51248	NBU 921-25A3DS	Sec 25 T09S R21E 1498 FNL 0736 FEL
	BHL	Sec 25 T09S R21E 1110 FNL 0776 FEL
43-047-51249	NBU 921-25G1CS	Sec 25 T09S R21E 1489 FNL 0754 FEL
	BHL	Sec 25 T09S R21E 1895 FNL 1893 FEL
43-047-51250	NBU 921-25G2AS	Sec 25 T09S R21E 1484 FNL 0763 FEL
	BHL	Sec 25 T09S R21E 1439 FNL 2042 FEL
43-047-51252	NBU 921-25H2AS	Sec 25 T09S R21E 1493 FNL 0745 FEL
	BHL	Sec 25 T09S R21E 1538 FNL 0857 FEL
43-047-51253	NBU 921-25H2DS	Sec 25 T09S R21E 1502 FNL 0727 FEL
	BHL	Sec 25 T09S R21E 1958 FNL 0913 FEL
<b>NBU 921-25J Pad</b>		
43-047-51254	NBU 921-25J4AS	Sec 25 T09S R21E 1878 FSL 1725 FEL
	BHL	Sec 25 T09S R21E 1795 FSL 1360 FEL
43-047-51255	NBU 921-25J4CS	Sec 25 T09S R21E 1886 FSL 1743 FEL
	BHL	Sec 25 T09S R21E 1604 FSL 1920 FEL
43-047-51256	NBU 921-25J1DS	Sec 25 T09S R21E 1882 FSL 1734 FEL
	BHL	Sec 25 T09S R21E 2218 FSL 1381 FEL
<b>NBU 921-25K Pad</b>		
43-047-51257	NBU 921-25K4BS	Sec 25 T09S R21E 1838 FSL 1400 FWL
	BHL	Sec 25 T09S R21E 1848 FSL 2161 FWL
43-047-51258	NBU 921-25L2AS	Sec 25 T09S R21E 1848 FSL 1402 FWL
	BHL	Sec 25 T09S R21E 2423 FSL 0465 FWL

API #	WELL NAME	LOCATION
(Proposed PZ WASATCH-MESA VERDE)		
43-047-51259	NBU 921-25L4AS	Sec 25 T09S R21E 1829 FSL 1397 FWL
	BHL	Sec 25 T09S R21E 1975 FSL 1088 FWL
43-047-51260	NBU 921-25N2BS	Sec 25 T09S R21E 1819 FSL 1394 FWL
	BHL	Sec 25 T09S R21E 1260 FSL 1508 FWL
<b>NBU 921-25N Pad</b>		
43-047-51261	NBU 921-25K4CS	Sec 25 T09S R21E 1157 FSL 2585 FWL
	BHL	Sec 25 T09S R21E 1450 FSL 2045 FWL
43-047-51262	NBU 921-25N2DS	Sec 25 T09S R21E 1159 FSL 2565 FWL
	BHL	Sec 25 T09S R21E 0800 FSL 1896 FWL
43-047-51263	NBU 921-25N3AS	Sec 25 T09S R21E 1158 FSL 2575 FWL
	BHL	Sec 25 T09S R21E 0508 FSL 1729 FWL
43-047-51264	NBU 921-25O4BS	Sec 25 T09S R21E 1156 FSL 2595 FWL
	BHL	Sec 25 T09S R21E 0485 FSL 1741 FEL
<b>NBU 921-25C Pad</b>		
43-047-51265	NBU 921-25B3AS	Sec 25 T09S R21E 0645 FNL 1955 FWL
	BHL	Sec 25 T09S R21E 0720 FNL 1985 FEL
43-047-51266	NBU 921-25B3DS	Sec 25 T09S R21E 0654 FNL 1972 FWL
	BHL	Sec 25 T09S R21E 1070 FNL 1985 FEL
43-047-51267	NBU 921-25C2DS	Sec 25 T09S R21E 0640 FNL 1946 FWL
	BHL	Sec 25 T09S R21E 0504 FNL 1975 FWL
43-047-51268	NBU 921-25C3AS	Sec 25 T09S R21E 0650 FNL 1964 FWL
	BHL	Sec 25 T09S R21E 0841 FNL 1975 FWL
<b>NBU 921-25I Pad</b>		
43-047-51269	NBU 921-25H3DS	Sec 25 T09S R21E 2074 FSL 0690 FEL
	BHL	Sec 25 T09S R21E 2395 FNL 0870 FEL
43-047-51270	NBU 921-25I2AS	Sec 25 T09S R21E 2054 FSL 0687 FEL
	BHL	Sec 25 T09S R21E 2445 FSL 0924 FEL
43-047-51271	NBU 921-25I4AS	Sec 25 T09S R21E 2045 FSL 0686 FEL
	BHL	Sec 25 T09S R21E 1882 FSL 0091 FEL
43-047-51272	NBU 921-25I4DS	Sec 25 T09S R21E 2035 FSL 0684 FEL
	BHL	Sec 25 T09S R21E 1420 FSL 0105 FEL
43-047-51273	NBU 921-25IT	Sec 25 T09S R21E 2064 FSL 0689 FEL
	BHL	Sec 25 T09S R21E 2064 FSL 0689 FEL

API #	WELL NAME	LOCATION
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(Proposed PZ WASATCH-MESA VERDE)

**NBU 921-25J2 Pad**

43-047-51274	NBU 921-25G3AS	Sec 25 T09S R21E 2611 FSL 2578 FEL
	BHL	Sec 25 T09S R21E 2265 FNL 2136 FEL
43-047-51275	NBU 921-25G3CS	Sec 25 T09S R21E 2606 FSL 2587 FEL
	BHL	Sec 25 T09S R21E 2530 FNL 2518 FEL
43-047-51276	NBU 921-25J2CS	Sec 25 T09S R21E 2601 FSL 2596 FEL
	BHL	Sec 25 T09S R21E 2310 FSL 2410 FEL
43-047-51277	NBU 921-25K1CS	Sec 25 T09S R21E 2596 FSL 2605 FEL
	BHL	Sec 25 T09S R21E 2186 FSL 2231 FWL

This office has no objection to permitting the wells at this time.

Michael L. Coulthard

Digitally signed by Michael L. Coulthard  
DN: cn=Michael L. Coulthard, o=Bureau of Land Management, ou=Branch of Minerals,  
email=Michael.L.Coulthard@blm.gov, c=US  
Date: 2010.08.17 14:58:46 -0600

bcc: File - Natural Buttes Unit  
Division of Oil Gas and Mining  
Central Files  
Agr. Sec. Chron  
Fluid Chron

MCoulthard:mc:8-17-10



**ON-SITE PREDRILL EVALUATION****Utah Division of Oil, Gas and Mining**

<b>Operator</b>	KERR-MCGEE OIL & GAS ONSHORE, L.P.				
<b>Well Name</b>	NBU 921-25O4BS				
<b>API Number</b>	43047512640000	<b>APD No</b>	2949	<b>Field/Unit</b>	NATURAL BUTTES
<b>Location: 1/4,1/4</b>	SESW	<b>Sec</b>	25	<b>Tw</b>	9.0S
		<b>Rng</b>	21.0E	1156	FSL 2595 FWL
<b>GPS Coord (UTM)</b>	628082	4428953	<b>Surface Owner</b>		

**Participants**

Floyd Bartlett (DOGM), Sheila Wopsock, Clay Einerson, Roger Perry, Laura Gianokas, Lovel Young, Grizz Oleen, (Kerr McGee), Mitch.Batty, John Slaugh, (Timberline Engineering and Land Surveying), Ed Bonner (SITLA), Ben Williams (UDWR).

**Regional/Local Setting & Topography**

The general area is the Natural Buttes Unit in a major un-named drainage west of the lower portion of the Sand Wash drainage of Uintah, County, approximately 34 air miles and 42.4 road miles south of Vernal, Utah. Access is by State of Utah Highways, Uintah County and existing oilfield development roads. Topography of the area is characterized by open flats bordered or dissected by numerous sub-drainages, which often become steep with ridges and draws with exposed sandstone layers. No perennial streams occur in the drainage. Individual draws or washes are ephemeral with spring runoff or flows from sometimes-intense summer rainstorms. No springs exist in the area. An occasional constructed pond occurs furnishing water for antelope or livestock.

The NBU 921-25N pad will be created by enlarging the existing pad of the NBU 921-25NT gas well. Four gas wells, to be directionally drilled, will be added. They are the NBU 921-25N2DS, 921-25N3AS, 921-25K4CS and 921-25O4BS. The existing pad will be extended in all directions. The site is oriented in a west to east direction on the north slope of a ridge which continues to the south to a ridge-top. The excess spoils from the pad will block some side-slope overland flow from the south. A shallow drainage on the north will be missed. The White River is approximately 3 1/2 miles down drainage. The selected site appears to be suitable for enlarging a pad, drilling and operating the proposed wells and is the best site in the immediate area.

Both the surface and minerals are owned by SITLA.

**Surface Use Plan****Current Surface Use**

Grazing  
Wildlfe Habitat  
Existing Well Pad

<b>New Road Miles</b>	<b>Well Pad</b>	<b>Src Const Material</b>	<b>Surface Formation</b>
0	<b>Width</b> 420 <b>Length</b> 455	Onsite	UNTA

**Ancillary Facilities** N

**Waste Management Plan Adequate?****Environmental Parameters**

**Affected Floodplains and/or Wetlands** N

**Flora / Fauna**

Vegetation is a poor desert shrub type, which includes shadscale, curly mesquite, broom snakeweed and halogeton..

Antelope, sheep during the winter, rabbits, coyotes, and small mammals, birds and raptors.

### **Soil Type and Characteristics**

Surface soils are a moderately deep rocky loam.

**Erosion Issues** N

**Sedimentation Issues** Y

**Site Stability Issues** N

**Drainage Diversion Required?** N

**Berm Required?** N

**Erosion Sedimentation Control Required?** Y

The excess spoils from the pad will block some side-slope overland flow from the south

**Paleo Survey Run?** Y **Paleo Potential Observed?** N **Cultural Survey Run?** Y **Cultural Resources?** N

### **Reserve Pit**

#### **Site-Specific Factors**

#### **Site Ranking**

<b>Distance to Groundwater (feet)</b>	100 to 200	5
<b>Distance to Surface Water (feet)</b>	>1000	0
<b>Dist. Nearest Municipal Well (ft)</b>	>5280	0
<b>Distance to Other Wells (feet)</b>		20
<b>Native Soil Type</b>	Mod permeability	10
<b>Fluid Type</b>	Fresh Water	5
<b>Drill Cuttings</b>	Normal Rock	0
<b>Annual Precipitation (inches)</b>		0
<b>Affected Populations</b>		
<b>Presence Nearby Utility Conduits</b>	Not Present	0
<b>Final Score</b>	40	1 Sensitivity Level

#### **Characteristics / Requirements**

The proposed reserve pit is 100' x 220' x 12' deep located in a cut on the southeast side of the location. Kerr McGee plans a 30-mil liner with a double felt sub-liner.

**Closed Loop Mud Required?** N **Liner Required?** Y **Liner Thickness** 30 **Pit Underlayment Required?** Y

### **Other Observations / Comments**

Floyd Bartlett  
Evaluator

8/26/2010  
Date / Time

# Application for Permit to Drill

## Statement of Basis

10/13/2010

Utah Division of Oil, Gas and Mining

Page 1

<b>APD No</b>	<b>API WellNo</b>	<b>Status</b>	<b>Well Type</b>	<b>Surf Owner</b>	<b>CBM</b>
2949	43047512640000	LOCKED	GW	S	No
<b>Operator</b>	KERR-MCGEE OIL & GAS ONSHORE, L.P.		<b>Surface Owner-APD</b>		
<b>Well Name</b>	NBU 921-25O4BS		<b>Unit</b>	NATURAL BUTTES	
<b>Field</b>	NATURAL BUTTES		<b>Type of Work</b>	DRILL	
<b>Location</b>	SESW 25 9S 21E S 1156 FSL 2595 FWL GPS Coord (UTM) 628086E 4428956N				

### Geologic Statement of Basis

Kerr McGee proposes to set 2,300' of surface casing at this location. The depth to the base of the moderately saline water at this location is estimated to be at a depth of 1,450'. A search of Division of Water Rights records shows no water wells within a 10,000 foot radius of the center of Section 25. The surface formation at this site is the Uinta Formation. The Uinta Formation is made up of interbedded shales and sandstones. The sandstones are mostly lenticular and discontinuous and should not be a significant source of useable ground water. The proposed casing and cement should adequately protect any usable ground water.

Brad Hill  
APD Evaluator

9/28/2010  
Date / Time

### Surface Statement of Basis

The general area is the Natural Buttes Unit in a major un-named drainage west of the lower portion of the Sand Wash drainage of Uintah, County, approximately 34 air miles and 42.4 road miles south of Vernal, Utah. Access is by State of Utah Highways, Uintah County and existing oilfield development roads. Topography of the area is characterized by open flats bordered or dissected by numerous sub-drainages, which often become steep with ridges and draws with exposed sandstone layers. No perennial streams occur in the drainage. Individual draws or washes are ephemeral with spring runoff or flows from sometimes-intense summer rainstorms. No springs exist in the area. An occasional constructed pond occurs furnishing water for antelope or livestock.

The NBU 921-25N pad will be created by enlarging the existing pad of the NBU 921-25NT gas well. Four gas wells, to be directionally drilled, will be added. They are the NBU 921-25N2DS, 921-25N3AS, 921-25K4CS and 921-25O4BS. The existing pad will be extended in all directions. The site is oriented in a west to east direction on the north slope of a ridge which continues to the south to a ridge-top. The excess spoils from the pad will block some side-slope overland flow from the south. A shallow drainage on the north will be missed. The White River is approximately 3 1/2 miles down drainage. The selected site appears to be suitable for enlarging a pad, drilling and operating the proposed wells and is the best site in the immediate area.

Both the surface and minerals are owned by SITLA. Ed Bonner represented SITLA at the pre-site investigation. Mr. Bonner had no concerns pertaining to this location. SITLA will provide site reclamation standards and a seed mix.

Ben Williams represented the Utah Division of Wildlife Resources. Mr. Williams stated the area is classified as crucial yearlong antelope habitat but recommended no restrictions for this species. No other wildlife will be significantly affected.

Floyd Bartlett  
Onsite Evaluator

8/26/2010  
Date / Time

---

**Application for Permit to Drill  
Statement of Basis**

10/13/2010

**Utah Division of Oil, Gas and Mining**

Page 2

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Category	Condition
Pits	A synthetic liner with a minimum thickness of 30 mils with a double felt subliner shall be properly installed and maintained in the reserve pit.
Surface	The reserve pit shall be fenced upon completion of drilling operations.

# WORKSHEET

## APPLICATION FOR PERMIT TO DRILL

**APD RECEIVED:** 8/13/2010

**API NO. ASSIGNED:** 43047512640000

**WELL NAME:** NBU 921-25O4BS

**OPERATOR:** KERR-MCGEE OIL & GAS ONSHORE, L.P. (N2995)

**PHONE NUMBER:** 720 929-6156

**CONTACT:** Danielle Piernot

**PROPOSED LOCATION:** SESW 25 090S 210E

**Permit Tech Review:** ☒

**SURFACE:** 1156 FSL 2595 FWL

**Engineering Review:** ☒

**BOTTOM:** 0485 FSL 1741 FEL

**Geology Review:** ☒

**COUNTY:** UINTAH

**LATITUDE:** 40.00298

**LONGITUDE:** -109.49946

**UTM SURF EASTINGS:** 628086.00

**NORTHINGS:** 4428956.00

**FIELD NAME:** NATURAL BUTTES

**LEASE TYPE:** 3 - State

**LEASE NUMBER:** UO 4139 ST

**PROPOSED PRODUCING FORMATION(S):** WASATCH-MESA VERDE

**SURFACE OWNER:** 3 - State

**COALBED METHANE:** NO

### RECEIVED AND/OR REVIEWED:

- ☒ **PLAT**
- ☒ **Bond:** STATE/FEE - 22013542
- ☐ **Potash**
- ☒ **Oil Shale 190-5**
- ☐ **Oil Shale 190-3**
- ☐ **Oil Shale 190-13**
- ☒ **Water Permit:** Permit #43-8496
- ☐ **RDCC Review:**
- ☐ **Fee Surface Agreement**
- ☒ **Intent to Commingle**

**Commingle Approved**

### LOCATION AND SITING:

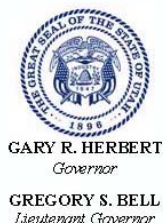
- ☐ **R649-2-3.**
- Unit:** NATURAL BUTTES
- ☐ **R649-3-2. General**
- ☐ **R649-3-3. Exception**
- ☒ **Drilling Unit**
- Board Cause No:** Cause 173-14
- Effective Date:** 12/2/1999
- Siting:** Suspends General Siting
- ☒ **R649-3-11. Directional Drill**

**Comments:** Presite Completed

**Stipulations:**

- 3 - Commingle - ddoucet
- 5 - Statement of Basis - bhill
- 15 - Directional - dmason
- 17 - Oil Shale 190-5(b) - dmason
- 25 - Surface Casing - hmadonald





## State of Utah

DEPARTMENT OF NATURAL RESOURCES

MICHAEL R. STYLER  
*Executive Director*

Division of Oil, Gas and Mining

JOHN R. BAZA  
*Division Director*

### Permit To Drill

\*\*\*\*\*

**Well Name:** NBU 921-25O4BS  
**API Well Number:** 43047512640000  
**Lease Number:** UO 4139 ST  
**Surface Owner:** STATE  
**Approval Date:** 10/13/2010

**Issued to:**

KERR-MCGEE OIL & GAS ONSHORE, L.P., P.O. Box 173779, Denver, CO 80217

**Authority:**

Pursuant to Utah Code Ann. §40-6-1 et seq., and Utah Administrative Code R649-3-1 et seq., the Utah Division of Oil, Gas and Mining issues conditions of approval, and permit to drill the listed well. This permit is issued in accordance with the requirements of Cause 173-14. The expected producing formation or pool is the WASATCH-MESA VERDE Formation(s), completion into any other zones will require filing a Sundry Notice (Form 9). Completion and commingling of more than one pool will require approval in accordance with R649-3-22.

**Duration:**

This approval shall expire one year from the above date unless substantial and continuous operation is underway, or a request for extension is made prior to the expiration date

**Commingling:**

In accordance with Board Cause No. 173-14, commingling of the production from the Wasatch formation and the Mesaverde formation in this well is allowed.

**General:**

Compliance with the requirements of Utah Admin. R. 649-1 et seq., the Oil and Gas Conservation General Rules, and the applicable terms and provisions of the approved Application for permit to drill.

**Conditions of Approval:**

In accordance with Utah Admin. R.649-3-11, Directional Drilling, the operator shall submit a complete angular deviation and directional survey report to the Division within 30 days following completion of the well.

In accordance with the Order in Cause No. 190-5(b) dated October 28, 1982, the operator shall comply with the requirements of Rules R649-3-31 and R649-3-27 pertaining to Designated Oil Shale Areas. Additionally, the operators shall ensure that the surface and or production casing is properly cemented over the entire oil shale section as defined by Rule R649-3-31. The Operator shall report the actual depth the oil shale is encountered to the division.

Compliance with the Conditions of Approval/Application for Permit to Drill outlined in the Statement of Basis (copy attached).

Surface casing shall be cemented to the surface.

**Additional Approvals:**

The operator is required to obtain approval from the Division of Oil, Gas and mining before performing any of the following actions during the drilling of this well:

- Any changes to the approved drilling plan – contact Dustin Doucet
- Significant plug back of the well – contact Dustin Doucet
- Plug and abandonment of the well – contact Dustin Doucet

**Notification Requirements:**

The operator is required to notify the Division of Oil, Gas and Mining of the following actions during drilling of this well:

- Within 24 hours following the spudding of the well – contact Carol Daniels  
OR  
submit an electronic sundry notice (pre-registration required) via the Utah Oil & Gas website at <https://oilgas.ogm.utah.gov>
- 24 hours prior to testing blowout prevention equipment - contact Dan Jarvis
- 24 hours prior to cementing or testing casing – contact Dan Jarvis
- Within 24 hours of making any emergency changes to the approved drilling program – contact Dustin Doucet
- 24 hours prior to commencing operations to plug and abandon the well – contact Dan Jarvis

**Contact Information:**

The following are Division of Oil, Gas and Mining contacts and their telephone numbers (please leave a voicemail message if the person is not available to take the call):

- Carol Daniels 801-538-5284 - office
- Dustin Doucet 801-538-5281 - office  
801-733-0983 - after office hours
- Dan Jarvis 801-538-5338 - office  
801-231-8956 - after office hours

**Reporting Requirements:**

All reports, forms and submittals as required by the Utah Oil and Gas Conservation General Rules will be promptly filed with the Division of Oil, Gas and Mining, including but not limited to:

- Entity Action Form (Form 6) – due within 5 days of spudding the well
- Monthly Status Report (Form 9) – due by 5th day of the following calendar month
- Requests to Change Plans (Form 9) – due prior to implementation
- Written Notice of Emergency Changes (Form 9) – due within 5 days
- Notice of Operations Suspension or Resumption (Form 9) – due prior to implementation
- Report of Water Encountered (Form 7) – due within 30 days after completion
- Well Completion Report (Form 8) – due within 30 days after completion or plugging

**Approved By:**



For John Rogers  
Associate Director, Oil & Gas

## BLM - Vernal Field Office - Notification Form

Operator KERR-McGEE OIL & GAS Rig Name/# BUCKET RIG  
Submitted By ANDY LYTLE Phone Number 720.929.6100  
Well Name/Number NBU 921-25O4BS  
Qtr/Qtr SESW Section 25 Township 9S Range 21E  
Lease Serial Number UO 4139 ST  
API Number 4304751264

Spud Notice – Spud is the initial spudding of the well, not drilling out below a casing string.

*01/04/2011 - Delay per operator*  
Date/Time ~~12/31/2010~~ 08:00 HRS AM ☐ PM ☐

Casing – Please report time casing run starts, not cementing times.

- ☒ Surface Casing  
☐ Intermediate Casing  
☐ Production Casing  
☐ Liner  
☐ Other

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JAN 03 2011

DIV. OF OIL, GAS &amp; MINING

Date/Time 01/18/2011 08:00 HRS AM ☐ PM ☐

BOPE

- ☐ Initial BOPE test at surface casing point  
☐ BOPE test at intermediate casing point  
☐ 30 day BOPE test  
☐ Other

Date/Time \_\_\_\_\_ AM ☐ PM ☐

Remarks ESTIMATED DATE AND TIME. PLEASE CONTACT KENNY GATHINGS AT

435.828.0986 OR LOVEL YOUNG AT 435.781.7051

**Carol Daniels - RE: Conductor Spuds on the NBU 921-25N PAD**

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**From:** "Lytle, Andrew"  
**To:** , "Carol Daniels" , "Rachel Medina"  
**Date:** 1/3/2011 8:05 AM  
**Subject:** RE: Conductor Spuds on the NBU 921-25N PAD  
**CC:** "Beale, Ila" , "Noonan, Ashley" , "Gathings, Kenny"

---

All,

Correction. Spuds should be completed by late morning tomorrow.

Thanks,

**Andy Lytle**  
**Anadarko E&P Company, LP**  
**Direct: 720-929-6100**  
**Fax: 720-929-7100**  
**andrew.lytle@anadarko.com**

---

**From:** Lytle, Andrew  
**Sent:** Monday, January 03, 2011 8:00 AM  
**To:** 'ut\_vn\_opreport@blm.gov'; 'Carol Daniels'; Rachel Medina  
**Cc:** Beale, Ila; Noonan, Ashley; Gathings, Kenny  
**Subject:** FW: Conductor Spuds on the NBU 921-25N PAD

All,

Please see email below. This State pad was supposed to have spud late last week, however, due to rig problems will not spud until today. Spuds should finish up by late morning. We will submit actual spud paperwork upon completion of conductor spud.

Thanks,  
Andy

**Andy Lytle**  
**Anadarko E&P Company, LP**  
**Direct: 720-929-6100**  
**Fax: 720-929-7100**  
**andrew.lytle@anadarko.com**

**RECEIVED**  
**JAN 03 2011**

DIV. OF OIL, GAS & MINING

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**From:** Gathings, Kenny  
**Sent:** Monday, January 03, 2011 7:56 AM  
**To:** Lytle, Andrew; Beale, Ila

**Subject:** Conductor Spuds on the NBU 921-25N PAD

All, we did not get started on the NBU 921-25N PAD last week due to problems with the rig. We will start that pad today and should have it completed by early morning at the latest. Below is a list of the wells on that pad

NBU 921-25O4BS / API #43-047-51264  
NBU 921-25K4CS / API #43-047-51261  
NBU 921-25N3AS / API #43-047-51263  
NBU 921-25N2DS / API #43-047-51262

***Kenneth Gathings  
Drilling Foreman  
Anadarko Petroleum Corporation  
1368 South 1200 East  
Vernal Utah 84078  
Office 435-781-7048  
Cell 435-790-4138  
Fax 435-781-7019***

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STATE OF UTAH  
DEPARTMENT OF NATURAL RESOURCES  
DIVISION OF OIL, GAS AND MINING

FORM 6

**ENTITY ACTION FORM**

Operator: KERR MCGEE OIL & GAS ONSHORE LP  
Address: P.O. Box 173779  
city DENVER  
state CO zip 80217

Operator Account Number: N 2995

Phone Number: (720) 929-6100

**Well 1**

API Number	Well Name		QQ	Sec	Twp	Rng	County
4304751264	NBU 921-25O4BS		SESW	25	9S	21E	UINTAH
Action Code	Current Entity Number	New Entity Number	Spud Date			Entity Assignment Effective Date	
<u>B</u>	99999	<u>2900</u>	1/4/2011			<u>1/13/2011</u>	
<b>Comments:</b> MIRU PETE MARTIN BUCKET RIG. <u>WSMVD</u> SPUD WELL LOCATION ON 01/04/2011 AT 9:00 HRS. <u>BHL SWSE</u>							

**Well 2**

API Number	Well Name		QQ	Sec	Twp	Rng	County
4304751261	NBU 921-25K4CS		SESW	25	9S	21E	UINTAH
Action Code	Current Entity Number	New Entity Number	Spud Date			Entity Assignment Effective Date	
<u>B</u>	99999	<u>2900</u>	1/3/2011			<u>1/13/2011</u>	
<b>Comments:</b> MIRU PETE MARTIN BUCKET RIG. <u>WSMVD</u> SPUD WELL LOCATION ON 01/03/2011 AT 9:00 HRS. <u>BHL = NESW</u>							

**Well 3**

API Number	Well Name		QQ	Sec	Twp	Rng	County
4304751263	NBU 921-25N3AS		SESW	25	9S	21E	UINTAH
Action Code	Current Entity Number	New Entity Number	Spud Date			Entity Assignment Effective Date	
<u>B</u>	99999	<u>2900</u>	1/3/2011			<u>1/13/2011</u>	
<b>Comments:</b> MIRU PETE MARTIN BUCKET RIG. <u>WSMVD</u> SPUD WELL LOCATION ON 01/03/2011 AT 15:00 HRS. <u>BHL = SESW</u>							

**ACTION CODES:**

- A - Establish new entity for new well (single well only)
- B - Add new well to existing entity (group or unit well)
- C - Re-assign well from one existing entity to another existing entity
- D - Re-assign well from one existing entity to a new entity
- E - Other (Explain in 'comments' section)

ANDY LYTLE

Name (Please Print)

Signature

REGULATORY ANALYST

Title

1/7/2011

Date

**RECEIVED**

**JAN 10 2011**

**DIV. OF OIL, GAS & MINING**

<b>STATE OF UTAH</b> DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS, AND MINING		<b>FORM 9</b>
<b>SUNDRY NOTICES AND REPORTS ON WELLS</b>  Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.		<b>5. LEASE DESIGNATION AND SERIAL NUMBER:</b> UO 4139 ST
<b>1. TYPE OF WELL</b> Gas Well		<b>6. IF INDIAN, ALLOTTEE OR TRIBE NAME:</b>
<b>2. NAME OF OPERATOR:</b> KERR-MCGEE OIL & GAS ONSHORE, L.P.		<b>7. UNIT or CA AGREEMENT NAME:</b> NATURAL BUTTES
<b>3. ADDRESS OF OPERATOR:</b> P.O. Box 173779 1099 18th Street, Suite 600, Denver, CO, 80217 3779		<b>8. WELL NAME and NUMBER:</b> NBU 921-2504BS
<b>PHONE NUMBER:</b> 720 929-6007 Ext		<b>9. API NUMBER:</b> 43047512640000
<b>4. LOCATION OF WELL</b> <b>FOOTAGES AT SURFACE:</b> 1156 FSL 2595 FWL <b>QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN:</b> Qtr/Qtr: SESEW Section: 25 Township: 09.0S Range: 21.0E Meridian: S		<b>9. FIELD and POOL or WILDCAT:</b> NATURAL BUTTES
		<b>COUNTY:</b> UINTAH
		<b>STATE:</b> UTAH
<b>11. CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA</b>		
<b>TYPE OF SUBMISSION</b>	<b>TYPE OF ACTION</b>	
<input type="checkbox"/> <b>NOTICE OF INTENT</b> Approximate date work will start:	<input type="checkbox"/> <b>ACIDIZE</b>	
<input type="checkbox"/> <b>SUBSEQUENT REPORT</b> Date of Work Completion:	<input type="checkbox"/> <b>ALTER CASING</b>	
<input type="checkbox"/> <b>SPUD REPORT</b> Date of Spud:	<input type="checkbox"/> <b>CASING REPAIR</b>	
<input checked="" type="checkbox"/> <b>DRILLING REPORT</b> Report Date: 1/14/2011	<input type="checkbox"/> <b>CHANGE TO PREVIOUS PLANS</b>	
	<input type="checkbox"/> <b>CHANGE TUBING</b>	
	<input type="checkbox"/> <b>CHANGE WELL STATUS</b>	
	<input type="checkbox"/> <b>COMMINGLE PRODUCING FORMATIONS</b>	
	<input type="checkbox"/> <b>DEEPEN</b>	
	<input type="checkbox"/> <b>FRACTURE TREAT</b>	
	<input type="checkbox"/> <b>OPERATOR CHANGE</b>	
	<input type="checkbox"/> <b>PLUG AND ABANDON</b>	
	<input type="checkbox"/> <b>PRODUCTION START OR RESUME</b>	
	<input type="checkbox"/> <b>RECLAMATION OF WELL SITE</b>	
	<input type="checkbox"/> <b>REPERFORATE CURRENT FORMATION</b>	
	<input type="checkbox"/> <b>SIDETRACK TO REPAIR WELL</b>	
	<input type="checkbox"/> <b>TUBING REPAIR</b>	
	<input type="checkbox"/> <b>VENT OR FLARE</b>	
	<input type="checkbox"/> <b>WATER SHUTOFF</b>	
	<input type="checkbox"/> <b>SI TA STATUS EXTENSION</b>	
	<input type="checkbox"/> <b>WILDCAT WELL DETERMINATION</b>	
	<input type="checkbox"/> <b>OTHER</b>	
	OTHER: <input style="width: 100px;" type="text"/>	
<b>12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc.</b> MIRU CAPSTAR AIR RIG ON JANUARY 12, 2011. DRILLED 11" SURFACE HOLE TO 2595'. RAN 8 5/8" 28# IJ-55 SURFACE CSG. PUMP 120 BBLS FRESH WATER. PUMP 20 BBLS GEL WATER. PUMP 225 SX CLASS G PREM @ 15.8 PPG, 1.15 YD. DISPLACED W/ 149 BBLS WATER W/ 70 PSI LIFT @ 2.5 BBLS/MIN. BUMP PLUG @ 600 PSI. FLOAT HELD. NO CIRC THROUGH OUT JOB. TOP OUT W/ 200 SX CLASS G PREM @ 15.8 PPG, 1.15 YD. WOC. TOP OUT #2 W/ 200 SX CLASS G PREM @ 15.8 PPG, 1.15 YD. NO CEMENT TO SURFACE. WILL TOP OUT AGAIN ON NEXT JOB. WORT.		
<div style="text-align: right;"> <b>Accepted by the</b>  <b>Utah Division of</b>  <b>Oil, Gas and Mining</b>  <b>FOR RECORD ONLY</b> </div>		
<b>NAME (PLEASE PRINT)</b> Andy Lytle		<b>PHONE NUMBER</b> 720 929-6100
<b>SIGNATURE</b> N/A		<b>TITLE</b> Regulatory Analyst
		<b>DATE</b> 1/17/2011

BLM - Vernal Field Office - Notification Form

Operator KERR MCGEE Rig Name/# H&P 311  
Submitted By PAT CAIN Phone Number 435- 790-1884  
Well Name/Number NBU 921-2504BS  
Qtr/Qtr SE/SW Section 25 Township 9S Range 21E  
Lease Serial Number UO 4139 ST  
API Number 43-047-51264

Spud Notice – Spud is the initial spudding of the well, not drilling out below a casing string.

Date/Time \_\_\_\_\_ AM ☐ PM ☐

Casing – Please report time casing run starts, not cementing times.

- ☐ Surface Casing
- ☐ Intermediate Casing
- ☐ Production Casing
- ☐ Liner
- ☐ Other

RECEIVED

FEB 05 2011

DIV. OF OIL, GAS & MINING

Date/Time \_ \_ AM ☐ PM ☐

BOPE

- ☒ Initial BOPE test at surface casing point
- ☐ BOPE test at intermediate casing point
- ☐ 30 day BOPE test
- ☐ Other

Date/Time 2/6/2011 11:00 AM ☒ PM ☐

Remarks \_\_\_\_\_  
\_\_\_\_\_

<b>STATE OF UTAH</b> DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS, AND MINING		<b>FORM 9</b>
<b>SUNDRY NOTICES AND REPORTS ON WELLS</b>  Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.		<b>5. LEASE DESIGNATION AND SERIAL NUMBER:</b> UO 4139 ST
<b>1. TYPE OF WELL</b> Gas Well		<b>6. IF INDIAN, ALLOTTEE OR TRIBE NAME:</b>
<b>2. NAME OF OPERATOR:</b> KERR-MCGEE OIL & GAS ONSHORE, L.P.		<b>7. UNIT or CA AGREEMENT NAME:</b> NATURAL BUTTES
<b>3. ADDRESS OF OPERATOR:</b> P.O. Box 173779 1099 18th Street, Suite 600, Denver, CO, 80217 3779		<b>8. WELL NAME and NUMBER:</b> NBU 921-2504BS
<b>4. LOCATION OF WELL</b> <b>FOOTAGES AT SURFACE:</b> 1156 FSL 2595 FWL <b>QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN:</b> Qtr/Qtr: SESW Section: 25 Township: 09.0S Range: 21.0E Meridian: S		<b>9. API NUMBER:</b> 43047512640000
<b>PHONE NUMBER:</b> 720 929-6515 Ext		<b>9. FIELD and POOL or WILDCAT:</b> NATURAL BUTTES
<b>COUNTY:</b> UINTAH		<b>STATE:</b> UTAH

11. CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION		
<input type="checkbox"/> <b>NOTICE OF INTENT</b> Approximate date work will start:	<input type="checkbox"/> ACIDIZE <input type="checkbox"/> CHANGE TO PREVIOUS PLANS <input type="checkbox"/> CHANGE WELL STATUS <input type="checkbox"/> DEEPEN <input type="checkbox"/> OPERATOR CHANGE <input type="checkbox"/> PRODUCTION START OR RESUME <input type="checkbox"/> REPERFORATE CURRENT FORMATION <input type="checkbox"/> TUBING REPAIR <input type="checkbox"/> WATER SHUTOFF <input type="checkbox"/> WILDCAT WELL DETERMINATION	<input type="checkbox"/> ALTER CASING <input type="checkbox"/> CHANGE TUBING <input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS <input type="checkbox"/> FRACTURE TREAT <input type="checkbox"/> PLUG AND ABANDON <input type="checkbox"/> RECLAMATION OF WELL SITE <input type="checkbox"/> SIDETRACK TO REPAIR WELL <input type="checkbox"/> VENT OR FLARE <input type="checkbox"/> SI TA STATUS EXTENSION <input checked="" type="checkbox"/> OTHER	<input type="checkbox"/> CASING REPAIR <input type="checkbox"/> CHANGE WELL NAME <input type="checkbox"/> CONVERT WELL TYPE <input type="checkbox"/> NEW CONSTRUCTION <input type="checkbox"/> PLUG BACK <input type="checkbox"/> RECOMPLETE DIFFERENT FORMATION <input type="checkbox"/> TEMPORARY ABANDON <input type="checkbox"/> WATER DISPOSAL <input type="checkbox"/> APD EXTENSION OTHER: <span style="border: 1px solid black; padding: 2px;">RIG RELEASE</span>
<input checked="" type="checkbox"/> <b>SUBSEQUENT REPORT</b> Date of Work Completion: 2/14/2011			
<input type="checkbox"/> <b>SPUD REPORT</b> Date of Spud:			
<input type="checkbox"/> <b>DRILLING REPORT</b> Report Date:			

12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc.  
 FINISHED DRILLING FROM 2595' TO 9685' ON FEBRUARY 12, 2011. RAN 4 1/2" 11.6# I-80 PRODUCTION CSG. PUMP 40 BBLS SPACER, LEAD CEMENT W/ 530 SX CLASS G ECONOCEM @ 12.5 PPG, 1.98 YD. TAILED CEMENT W/ 1150 SX CLASS G 50/50 POZ MIX @ 14.3 PPG, 1.25 YD. DISPLACED W/ 149.3 BBLS WATER TREATED W/ BIOCIDES & CLAY INHIBITOR, BUMPED PLUG @ 2200 PSI, PRESSURED UP CSG TO 2910 PSI & HELD 5 MIN. RELEASED PRESSURE & FLOATS HELD. FLOWED BACK 1.75 BBLS. EST TOC TAIL @ 4300', LEAD @ 900'. HAD 100% RETURNS, HAD +/- 5 BBLS SPACER WATER BACK TO SURFACE. RD CEMENTERS AND CLEANED PITS. RELEASED H&P RIG #311 ON FEBRUARY 14, 2011 @ 22:30 HRS.

<b>NAME (PLEASE PRINT)</b> Andy Lytle	<b>PHONE NUMBER</b> 720 929-6100	<b>TITLE</b> Regulatory Analyst
<b>SIGNATURE</b> N/A		<b>DATE</b> 2/15/2011

 Accepted by the  
 Utah Division of  
 Oil, Gas and Mining  
**FOR RECORD ONLY**

<b>STATE OF UTAH</b> DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS, AND MINING		<b>FORM 9</b>
<b>SUNDRY NOTICES AND REPORTS ON WELLS</b>  Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.		<b>5. LEASE DESIGNATION AND SERIAL NUMBER:</b> UO 4139 ST
<b>1. TYPE OF WELL</b> Gas Well		<b>6. IF INDIAN, ALLOTTEE OR TRIBE NAME:</b>
<b>2. NAME OF OPERATOR:</b> KERR-MCGEE OIL & GAS ONSHORE, L.P.		<b>7. UNIT or CA AGREEMENT NAME:</b> NATURAL BUTTES
<b>3. ADDRESS OF OPERATOR:</b> P.O. Box 173779 1099 18th Street, Suite 600, Denver, CO, 80217 3779		<b>8. WELL NAME and NUMBER:</b> NBU 921-2504BS
<b>4. LOCATION OF WELL</b> <b>FOOTAGES AT SURFACE:</b> 1156 FSL 2595 FWL <b>QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN:</b> Qtr/Qtr: SESW Section: 25 Township: 09.0S Range: 21.0E Meridian: S		<b>9. API NUMBER:</b> 43047512640000
<b>PHONE NUMBER:</b> 720 929-6515 Ext		<b>9. FIELD and POOL or WILDCAT:</b> NATURAL BUTTES
<b>COUNTY:</b> UINTAH		<b>STATE:</b> UTAH
<b>11. CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA</b>		
<b>TYPE OF SUBMISSION</b>	<b>TYPE OF ACTION</b>	
<input type="checkbox"/> <b>NOTICE OF INTENT</b> Approximate date work will start:	<input type="checkbox"/> <b>ACIDIZE</b>	
<input type="checkbox"/> <b>SUBSEQUENT REPORT</b> Date of Work Completion:	<input type="checkbox"/> <b>ALTER CASING</b>	
<input type="checkbox"/> <b>SPUD REPORT</b> Date of Spud:	<input type="checkbox"/> <b>CASING REPAIR</b>	
<input checked="" type="checkbox"/> <b>DRILLING REPORT</b> Report Date: 5/4/2011	<input type="checkbox"/> <b>CHANGE TO PREVIOUS PLANS</b>	
	<input type="checkbox"/> <b>CHANGE WELL STATUS</b>	
	<input type="checkbox"/> <b>CHANGE WELL STATUS</b>	
	<input type="checkbox"/> <b>DEEPEN</b>	
	<input type="checkbox"/> <b>OPERATOR CHANGE</b>	
	<input checked="" type="checkbox"/> <b>PRODUCTION START OR RESUME</b>	
	<input type="checkbox"/> <b>REPERFORATE CURRENT FORMATION</b>	
	<input type="checkbox"/> <b>TUBING REPAIR</b>	
	<input type="checkbox"/> <b>WATER SHUTOFF</b>	
	<input type="checkbox"/> <b>WILDCAT WELL DETERMINATION</b>	
	<input type="checkbox"/> <b>ALTER CASING</b>	
	<input type="checkbox"/> <b>CHANGE TUBING</b>	
	<input type="checkbox"/> <b>COMMINGLE PRODUCING FORMATIONS</b>	
	<input type="checkbox"/> <b>FRACTURE TREAT</b>	
	<input type="checkbox"/> <b>PLUG AND ABANDON</b>	
	<input type="checkbox"/> <b>RECLAMATION OF WELL SITE</b>	
	<input type="checkbox"/> <b>SIDETRACK TO REPAIR WELL</b>	
	<input type="checkbox"/> <b>VENT OR FLARE</b>	
	<input type="checkbox"/> <b>SI TA STATUS EXTENSION</b>	
	<input type="checkbox"/> <b>OTHER:</b> <input style="width: 100px;" type="text"/>	
<b>12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc.</b>  THE SUBJECT WELL LOCATION WAS PLACED ON PRODUCTION ON 05/04/2011 AT 12:00 PM. THE CHRONOLOGICAL WELL HISTORY WILL BE SUBMITTED WITH THE WELL COMPLETION REPORT.		
<b>Accepted by the Utah Division of Oil, Gas and Mining FOR RECORD ONLY</b>		
<b>NAME (PLEASE PRINT)</b> Sheila Wopsock		<b>PHONE NUMBER</b> 435 781-7024
<b>SIGNATURE</b> N/A		<b>TITLE</b> Regulatory Analyst
<b>DATE</b> 5/4/2011		



STATE OF UTAH  
DEPARTMENT OF NATURAL RESOURCES  
DIVISION OF OIL, GAS AND MINING

AMENDED REPORT ☐ FORM 8  
(highlight changes)

5. LEASE DESIGNATION AND SERIAL NUMBER:  
UO 4139 ST

6. IF INDIAN, ALLOTTEE OR TRIBE NAME

7. UNIT or CA AGREEMENT NAME  
UTU63047A

8. WELL NAME and NUMBER:  
NBU 921-2504BS

9. API NUMBER:  
4304751264

10. FIELD AND POOL, OR WILDCAT  
NATURAL BUTTES

11. QTR/QTR, SECTION, TOWNSHIP, RANGE,  
MERIDIAN:  
SESW 25 9S 21E S

12. COUNTY  
UINTAH

13. STATE  
UTAH

WELL COMPLETION OR RECOMPLETION REPORT AND LOG

1a. TYPE OF WELL: OIL WELL ☐ GAS WELL ☒ DRY ☐ OTHER

b. TYPE OF WORK: NEW WELL ☒ HORIZ. LATS. ☐ DEEP-EN ☐ RE-ENTRY ☐ DIFF. RESVR. ☐ OTHER

2. NAME OF OPERATOR:  
KERR MCGEE OIL & GAS ONSHORE, L.P.

3. ADDRESS OF OPERATOR: P.O. BOX 173779 CITY DENVER STATE CO ZIP 80217  
PHONE NUMBER: (720) 929-6100

4. LOCATION OF WELL (FOOTAGES)  
AT SURFACE: SESW 1156 FSL 2595 FWL S25, T9S, R21E  
AT TOP PRODUCING INTERVAL REPORTED BELOW: SWSE 493 FSL 1760 FEL S25, T9S, R21E  
AT TOTAL DEPTH: SWSE 478 FSL 1744 FEL S25, T9S, R21E

14. DATE SPUDDED: 1/4/2011  
15. DATE T.D. REACHED: 2/12/2011  
16. DATE COMPLETED: 5/4/2011  
ABANDONED ☐ READY TO PRODUCE ☒

17. ELEVATIONS (DF, RKB, RT, GL):  
4955 GL

18. TOTAL DEPTH: MD 9,685  
TVD 9,540  
19. PLUG BACK T.D.: MD 9,629  
TVD 9,484  
20. IF MULTIPLE COMPLETIONS, HOW MANY? \*

21. DEPTH BRIDGE MD  
PLUG SET: TVD

22. TYPE ELECTRIC AND OTHER MECHANICAL LOGS RUN (Submit copy of each)

GR/RCBL-BHV-SD/DSN/ACTR

23.  
WAS WELL CORED? NO ☒ YES ☐ (Submit analysis)  
WAS DST RUN? NO ☒ YES ☐ (Submit report)  
DIRECTIONAL SURVEY? NO ☐ YES ☒ (Submit copy)

24. CASING AND LINER RECORD (Report all strings set in well)

HOLE SIZE	SIZE/GRADE	WEIGHT (#/ft.)	TOP (MD)	BOTTOM (MD)	STAGE CEMENTER DEPTH	CEMENT TYPE & NO. OF SACKS	SLURRY VOLUME (BBL)	CEMENT TOP **	AMOUNT PULLED
20"	14" STL	36.7#		40		28			
11"	8 5/8" IJ-55	28#		2,588		775		0	
7 7/8"	4 1/2" I-80	11.6#		9,672		1,680		1090	

25. TUBING RECORD

SIZE	DEPTH SET (MD)	PACKER SET (MD)	SIZE	DEPTH SET (MD)	PACKER SET (MD)	SIZE	DEPTH SET (MD)	PACKER SET (MD)
2 3/8"	8,923							

26. PRODUCING INTERVALS

FORMATION NAME	TOP (MD)	BOTTOM (MD)	TOP (TVD)	BOTTOM (TVD)	INTERVAL (Top/Bot - MD)	SIZE	NO. HOLES	PERFORATION STATUS
(A) MESAVERDE	7,486	9,540			7,486 9,540	0.36	163	Open <input checked="" type="checkbox"/> Squeezed <input type="checkbox"/>
(B) WSMVD								Open <input type="checkbox"/> Squeezed <input type="checkbox"/>
(C)								Open <input type="checkbox"/> Squeezed <input type="checkbox"/>
(D)								Open <input type="checkbox"/> Squeezed <input type="checkbox"/>

27. PERFORATION RECORD

28. ACID, FRACTURE, TREATMENT, CEMENT SQUEEZE, ETC.

DEPTH INTERVAL	AMOUNT AND TYPE OF MATERIAL
7486 - 9540	PUMP 6,114 BBLS SLICK H2O & 119,670 LBS SAND

29. ENCLOSED ATTACHMENTS:

☐ ELECTRICAL/MECHANICAL LOGS  
☐ SUNDRY NOTICE FOR PLUGGING AND CEMENT VERIFICATION  
☐ GEOLOGIC REPORT  
☐ CORE ANALYSIS  
☐ DST REPORT  
☐ OTHER:  
☒ DIRECTIONAL SURVEY

PROD

## 31. INITIAL PRODUCTION

## INTERVAL A (As shown in Item #26)

DATE FIRST PRODUCED: 5/4/2011		TEST DATE: 5/11/2011		HOURS TESTED: 24		TEST PRODUCTION RATES: →	OIL – BBL: 0	GAS – MCF: 1,510	WATER – BBL: 441	PROD. METHOD: FLOWING
CHOKE SIZE: 20/64	TBG. PRESS. 998	CSG. PRESS. 1,614	API GRAVITY	BTU – GAS	GAS/OIL RATIO	24 HR PRODUCTION RATES: →	OIL – BBL: 0	GAS – MCF: 1,510	WATER – BBL: 441	INTERVAL STATUS: PROD

## INTERVAL B (As shown in Item #26)

DATE FIRST PRODUCED:		TEST DATE:		HOURS TESTED:		TEST PRODUCTION RATES: →	OIL – BBL:	GAS – MCF:	WATER – BBL:	PROD. METHOD:
CHOKE SIZE:	TBG. PRESS.	CSG. PRESS.	API GRAVITY	BTU – GAS	GAS/OIL RATIO	24 HR PRODUCTION RATES: →	OIL – BBL:	GAS – MCF:	WATER – BBL:	INTERVAL STATUS:

## INTERVAL C (As shown in Item #26)

DATE FIRST PRODUCED:		TEST DATE:		HOURS TESTED:		TEST PRODUCTION RATES: →	OIL – BBL:	GAS – MCF:	WATER – BBL:	PROD. METHOD:
CHOKE SIZE:	TBG. PRESS.	CSG. PRESS.	API GRAVITY	BTU – GAS	GAS/OIL RATIO	24 HR PRODUCTION RATES: →	OIL – BBL:	GAS – MCF:	WATER – BBL:	INTERVAL STATUS:

## INTERVAL D (As shown in Item #26)

DATE FIRST PRODUCED:		TEST DATE:		HOURS TESTED:		TEST PRODUCTION RATES: →	OIL – BBL:	GAS – MCF:	WATER – BBL:	PROD. METHOD:
CHOKE SIZE:	TBG. PRESS.	CSG. PRESS.	API GRAVITY	BTU – GAS	GAS/OIL RATIO	24 HR PRODUCTION RATES: →	OIL – BBL:	GAS – MCF:	WATER – BBL:	INTERVAL STATUS:

## 32. DISPOSITION OF GAS (Sold, Used for Fuel, Vented, Etc.)

## 33. SUMMARY OF POROUS ZONES (Include Aquifers):

Show all important zones of porosity and contents thereof. Cored intervals and all drill-stem tests, including depth interval tested, cushion used, time tool open, flowing and shut-in pressures and recoveries.

## 34. FORMATION (Log) MARKERS:

Formation	Top (MD)	Bottom (MD)	Descriptions, Contents, etc.	Name	Top (Measured Depth)
GREEN RIVER	1,476				
BIRD'S NEST	1,750				
MAHOGANY	2,152				
WASATCH	4,793	7,470			
MESAVERDE	7,470	9,685	TD		

## 35. ADDITIONAL REMARKS (Include plugging procedure)

Attached is the chronological well history, perforation report and final survey. Completion chrono details individual frac stages.

## 36. I hereby certify that the foregoing and attached information is complete and correct as determined from all available records.

NAME (PLEASE PRINT) ANDREW LYTLETITLE REGULATORY ANALYSTSIGNATURE DATE 6/1/2011

This report must be submitted within 30 days of

- completing or plugging a new well
- drilling horizontal laterals from an existing well bore
- reentering a previously plugged and abandoned well
- significantly deepening an existing well bore below the previous bottom-hole depth
- recompleting to a different producing formation
- drilling hydrocarbon exploratory holes, such as core samples and stratigraphic tests

\* ITEM 20: Show the number of completions if production is measured separately from two or more formations.

\*\* ITEM 24: Cement Top – Show how reported top(s) of cement were determined (circulated (CIR), calculated (CAL), cement bond log (CBL), temperature survey (TS)).

Send to: Utah Division of Oil, Gas and Mining  
1594 West North Temple, Suite 1210  
Box 145801  
Salt Lake City, Utah 84114-5801

Phone: 801-538-5340

Fax: 801-359-3940

**US ROCKIES REGION**  
**Operation Summary Report**

Well: NBU 921-2504BS RED	Spud Conductor: 1/4/2011	Spud Date: 1/13/2011
Project: UTAH-UINTAH	Site: NBU 921-25N PAD	Rig Name No: H&P 311/311, CAPSTAR 310/310
Event: DRILLING	Start Date: 1/2/2011	End Date: 2/15/2011
Active Datum: RKB @4,980.00ft (above Mean Sea Level)		UWI: SE/SW/0/9/S/21/E/25/0/0/26/PM/S/1156/W/0/2595/0/0

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (ft)	Operation
1/12/2011	10:30 - 16:00	5.50	DRLSUR	01	A	P		CONDUCT SAFETY MEETING WITH RIG UP TRUCKS AND MOVE RIG TO NBU 921-25N PAD
	16:00 - 22:00	6.00	DRLSUR	01	B	P		RIG UP BACK YARD BOILER SUB DOG HOUSE, RAISE DERRICK. WHILE RIGGING UP WELDER MODIFIED BACK YARD FOR SKID PACKAGE
	22:00 - 0:00	2.00	DRLSUR	14	A	P		WELD ON CONDUCTOR AND RIG UP FLOW LINE
1/13/2011	0:00 - 2:00	2.00	DRLSUR	01	B	P		INSTALL TARPS AROUND SUB AND ALL WINTERIZING / BOILER LINES
	2:00 - 3:30	1.50	DRLSUR	06	A	P		PICK UP NEW MUD MOTOR, BIT, AND SHOCK SUB
	3:30 - 5:30	2.00	DRLSUR	02	C	P		SPUD WELL DRILL F/ 40' - 223' WOB 4-7 ROT 45-50 DHR 96 GPM 600 NO LOSSES
	5:30 - 8:00	2.50	DRLSUR	06	A	P		TOOH PICK UP DIRECTIONAL MONELS AND MWD TOOL ORIENT TO MUD MOTOR AND TIH
	8:00 - 11:00	3.00	DRLSUR	02	C	P		DRILL F/ 223' - 541' AVE ROP 106 FT HR WOB 20-22 ROT 45-55 DHR 96 GPM 600 OBP 1250 OFBP 950 NO LOSSES LAST SURVEY 2.69 DEG 180.16 AZI
	11:00 - 14:00	3.00	DRLSUR	08	B	Z		CHANGE OUT BROKEN TOP DRIVE LOCK
	14:00 - 14:30	0.50	DRLSUR	07	A	P		DAILY RIG SERVICE
	14:30 - 0:00	9.50	DRLSUR	02	C	P		DRILL F/541' - 1586' AVE ROP 110 FT HR WOB 20-22 ROT 45-55 DHR 96 GPM 600 OBP 1250 OFBP 950 NO LOSSES LAST SURVEY 17.94 DEG 125.41 AZI
1/14/2011	-		DRLSUR					CONDUCTOR CASING: Cond. Depth set: 40 Cement sx used: 28
								SPUD DATE/TIME: 1/13/2011 3:30
								SURFACE HOLE: Surface From depth: 40 Surface To depth: 2,595 Total SURFACE hours: 27.00 Surface Casing size: 8 5/8 # of casing joints ran: 58 Casing set MD: 2,562.0 # sx of cement: 200/225/350 Cement blend (ppg): 11.0/15.8/15.8 Cement yield (ft3/sk): 3.82/1.15/1.15 # of bbls to surface: 30 Describe cement issues:
	0:00 - 12:30	12.50	DRLSUR	02	C	P		DIRLL F/ 1586' - 2695' 1109 FT, 88.7 FPH, WOB-20-22, ROT45-55, GPM 600NO LOSSES, LAST SURVEY @2535-IMC 15.89, AZI 118.76, BOTTOM HOLE CLOSURE 498.71 ALONG AZIMUTH 124.89
	12:30 - 13:00	0.50	DRLSUR	05	C	P		CIRC BEFORE TRIP OUT TO RUN CSG
	13:00 - 14:30	1.50	DRLSUR	06	D	P		T.O.H TO RUN SURFACE CSG.
	14:30 - 15:00	0.50	DRLSUR	08	A	Z		REPAIR HYDRO HOSE
	15:00 - 16:00	1.00	DRLSUR	06	D	P		T.O.H . TO RUN CSG
	16:00 - 17:30	1.50	DRLSUR	01	E	P		LAY DOWN DIRECTIONAL TOOLS
	17:30 - 21:00	3.50	DRLSUR	12	A	P		CONDUCT SAFETY MTG,RU AND RUN 58 JTF 8 5/8 SURFACE CASING,SHOE @2562, FIBER BAFFLE @2516, NO CIRC

**US ROCKIES REGION**  
**Operation Summary Report**

Well: NBU 921-2504BS RED			Spud Conductor: 1/4/2011			Spud Date: 1/13/2011			
Project: UTAH-UINTAH			Site: NBU 921-25N PAD				Rig Name No: H&P 311/311, CAPSTAR 310/310		
Event: DRILLING			Start Date: 1/2/2011				End Date: 2/15/2011		
Active Datum: RKB @4,980.00ft (above Mean Sea Level)			UWI: SE/SW/0/9/S/21/E/25/0/0/26/PM/S/1156/W/0/2595/0/0						
Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (ft)	Operation	
	21:00 - 0:00	3.00	DRLSUR	12	B	P		SAFETY MTG W/SUPERIOR CEMENTORS, 2000 PSI TEST,PUMPED 75 BBL H2O SPACER, PUMPED 225 SKS @15.9#,FINAL PSI 200#, BUMPED PLUG W/ 600#, FLOAT HELD, CUT OFF ROT HEAD, TOP OUT W/ 200SKS @15.8#, W/1--# RUB RUB 25# SF. RIG RELEASED	
2/1/2011	18:00 - 0:00	6.00	DRLPRO	01	E	P		RD & PREP TO MOVE RIG TO LOCATION	
2/2/2011	0:00 - 13:30	13.50	RDMO	01	E	P		RIGGED DOWN BY HAND.	
	13:30 - 18:00	4.50	RDMO	01	E	P		TRUCKS AND CRANES ARRIVED. RIGGED UP CRANE AND REMOVED WIND WALLS. TRUCKS HAULED PIPE TUBS, CATWALK, BEAVER SLIDE, YELLOW DOG, ALL LOOSE PIPE AND PIPE RACKS. HAULED 10 LOADS WITH 1 BED TRUCK AND 4 HAUL TRUCKS.	
2/3/2011	18:00 - 0:00	6.00	RDMO	01	E	P		WAITED ON DAYLIGHT.	
	0:00 - 6:00	6.00	RDMO	01	E	P		WAIT ON DAYLIGHT	
	6:00 - 18:00	12.00	RDMO	01	E	P		CONTINUED TO RIG DOWN. HAULED BACKYARD OUT, RIGGED UP 2ND CRANE AT 1000 HRS. MAST DOWN AT 1330 AND OFF THE FLOOR AT 1500 HRS. RIGGED SUB DOWN TO THE CENTER STEEL. ALL OTHER PARTS ARE OFF OF THE OLD LOCATION. ON THE 921-25N PAD SET THE MUD TANKS, WATER TANKS, PROCESS TANK AND SHAKERS. HAVING TO RIGGING UP ON A DUMMY WELL 20' FROM THE FIRST WELL DUE TO THE SHORTNESS OF THE RESERVE PIT. WILL HAVE TO GET RIGGED UP AND SKID TO THE FIRST WELL. SLIGHT DAMAGE TO ONE OF THE FRAC TANKS PULLING IT OFF THE GROUND. MOVED CAMPS TO NEW LOCATION. SHUT DOWN FOR NIGHT.	
2/4/2011	18:00 - 0:00	6.00	RDMO	01	E	P		WAIT ON DAYLIGHT.	
	0:00 - 6:00	6.00	RDMO	01	E	P		WAIT ON DAYLIGHT TO RESUME RIG MOVE.	
	6:00 - 18:00	12.00	RDMO	01	A	P		DISASSEMBLED SUB AND HAULED TO NBU 921-25N PAD. HAD ENTIRE RIG OFF LOCATION AT 1230 HRS AND STARTED CLEANING LOCATION. SET MUD TANKS, UPRIGHT TANKS, VDR HOUSE, GENERATORS, AIR COMPRESSOR HOUSE, SKID RAILS, JACK BOXES, BOP DECK, PORCHES AND SOME WIND WALLS. ONCE WE GOT TO THE CENTER STEEL WE SHUT DOWN FOR NIGHT. TRENCHED LOCATION FOR DRAINAGE DITCHES.	
2/5/2011	18:00 - 0:00	6.00	MIRU	01	B	P		WAIT ON DAYLIGHT TO RESUME RIGGING UP RIG. HAULED WATER TO THE RESERVE PIT.	
	0:00 - 6:00	6.00	MIRU	01	B	P		WAIT ON DAYLIGHT TO RESUME RIG UP OPERATIONS.	
	6:00 - 17:30	11.50	MIRU	01	B	P		SET CENTER STEEL AND ASSEMBLED RIG. PUT DERRICK TOGETHER AND SET ON FLOOR. RAISED DERRICK AT 1530 HRS AND RELEASED ALL TRUCKS AND CRANES AT 1730 HRS. CONTINUED TO FILL RESERVE PIT. BROKE TOUR AFTER MAST WAS RAISED.	
2/6/2011	17:30 - 0:00	6.50	MIRU	01	B	P		CONTINUED RIGGING UP BY HAND WITH ONE CREW.	
	0:00 - 6:00	6.00	MIRU	01	B	P		CONTINUED TO RIG UP BY HAND.	
	6:00 - 8:00	2.00	MIRU	01	C	P		PREPARED RIG TO SKID DUE TO RESERVE PIT . HAD TO RIG UP 30' FROM FIRST WELL SO SHAKERS WOULD LINE UP.	
	8:00 - 10:00	2.00	MIRU	01	C	P		SKIDDED AND CENTERED RIG OVER WELL #1.	
	10:00 - 17:00	7.00	MIRU	14	A	P		NU BOPE	

**US ROCKIES REGION**  
**Operation Summary Report**

Well: NBU 921-25O4BS RED		Spud Conductor: 1/4/2011	Spud Date: 1/13/2011
Project: UTAH-UINTAH		Site: NBU 921-25N PAD	Rig Name No: H&P 311/311, CAPSTAR 310/310
Event: DRILLING		Start Date: 1/2/2011	End Date: 2/15/2011
Active Datum: RKB @4,980.00ft (above Mean Sea Level)		UWI: SE/SW/0/9/S/21/E/25/0/0/26/PM/S/1156/W/0/2595/0/0	

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (ft)	Operation
2/7/2011	17:00 - 18:00	1.00	MIRU	15	A	P		RIGGED UP BOPE TESTER
	18:00 - 0:00	6.00	MIRU	15	A	P		TESTED BOPE. PRESSURE TEST PIPE RAMS, BLIND RAMS, IBOP, FLOOR VALVE, KILL LINE, & KILL LINE VALVES, BOP WING VALVES, HCR VALVE, CHOKE LINE INNER & OUTER CHOKE VALVES, & MANIFOLD 250 PSI LOW/ 5 MINUTES, 5K HIGH FOR 10 MINUTES, TEST ANNULAR 250 LOW/5 MINUTES, 2500 HIGH/10 MINUTES, TEST SUPER CHOKE. FUNCTION TEST CLOSING UNIT. PRESSURE TESTED SURFACE CASING TO 1500 PSI FOR 30 MINUTES THEN FILLED CHOKE LINES AND CHOKE MANIFOLD WITH METHANOL. INSTALLED WEAR BUSHING.
	0:00 - 1:30	1.50	DRLPRO	15	A	P		ATTEMPTED TO INSTALL ROTATING MOUSEHOLE. WOULD NOT LINE UP. TRIED REDIGGING PORTIONS OF IT, TRIED ADJUSTING CELLAR COVER, NO HELP. INSTALLED REGULAR MOUSEHOLE.
	1:30 - 2:00	0.50	DRLPRO	14	B	P		LOADED PIPE RACK AND STRAPPED BHA. REMOVED REGULAR MOUSEHOLE TO USE A PU MACHINE TO PICKUP THE BHA.
	2:00 - 5:00	3.00	DRLPRO	06	A	P		RIG SERVICE.
	5:00 - 7:00	2.00	DRLPRO	06	A	P		RIGGED UP LAYDOWN MACHINE TO PICK UP BHA AND DRILLPIPE TO TAG CEMENT.
	7:00 - 7:30	0.50	DRLPRO	07	A	P		MADE UP SECURITY FX65M, SERIAL #11620138 WITH 6-15S ON TO A SDI .23 REV/GAL, 1.5 DEGREE BEND, 7:8 LOBE, 6.4, 6.5" MUD MOTOR. PICKED UP/MADE UP DIRECTIONAL TOOLS, INSTALLED AND TEST E-FIELD TOOL, SCRIBED MUD MOTOR AND PICKED UP 30 JTS HWDP AND 45 JTS DP. TAGGED CEMENT AT 2485'. WASHED THRU AND TAGGED BAFFLE PLATE AT 2551'.
	7:30 - 8:30	1.00	DRLPRO	06	A	P		RIGGED DOWN LAYDOWN TRUCK AND INSTALLED ROTATING MOUSEHOLE. WE HAD MADE SOME MODIFICATIONS WITH A WELDER AND APPLIED A BIT MORE PRESSURE TO MAKE THE ROTATING MOUSEHOLE FIT.
	8:30 - 14:00	5.50	DRLPRO	06	A	P		DRILLED BAFFLE PLATE, SHOE TRACK AND SHOE.
	14:00 - 15:30	1.50	DRLPRO	06	A	P		DRILLED 2611'-3590', 979' IN 7 HRS, 139.8 FPH. MADE 10 SLIDES OR AT LEAST 1 SLIDE EVERY STD. SLIDE A TOTAL OF 158' IN 3.5 HRS. WOB WAS 15-18K, PUMP #1 AT 110 SPM, 495 GPM, MOTOR TURNING AT 114 RPM WITH TOP DRIVE AT 45 RPM FOR A TOTAL OF 159 RPM AT THE BIT. DIFFERENTIAL PRESSURE WAS 350-500 PSI. ON/OFF BOTTOM PUMP PRESSURE WAS 1750/1360 PSI. ON/OFF BOTTOM TORQUE WAS 9/4K. PU/SO/ROT WAS 124/90/111. CIRCULATING THE RESERVE PIT.
	15:30 - 17:00	1.50	DRLPRO	02	F	P		DRILLED 3590'-4439', 849' IN 6 HRS, 141.5 FPH. MADE 5 SLIDES, 90' TOTAL IN 1.5 HOURS TOTAL SLIDE TIME. WOB WAS 15-18K, PUMP #1 AT 110 SPM, 495 GPM, MOTOR TURNING AT 114 RPM WITH TOP DRIVE AT 45 RPM FOR A TOTAL OF 159 RPM AT THE BIT. DIFFERENTIAL PRESSURE WAS 350-500 PSI. ON/OFF BOTTOM PUMP PRESSURE WAS 1850/1600 PSI. ON/OFF BOTTOM TORQUE WAS 9/7K. PU/SO/ROT WAS 130/95/119. CIRCULATING THE RESERVE PIT.
	17:00 - 0:00	7.00	DRLPRO	02	D	P		
	0:00 - 6:00	6.00	DRLPRO	02	D	P		



**US ROCKIES REGION**  
**Operation Summary Report**

Well: NBU 921-2504BS RED		Spud Conductor: 1/4/2011		Spud Date: 1/13/2011	
Project: UTAH-UINTAH		Site: NBU 921-25N PAD		Rig Name No: H&P 311/311, CAPSTAR 310/310	
Event: DRILLING		Start Date: 1/2/2011		End Date: 2/15/2011	
Active Datum: RKB @4,980.00ft (above Mean Sea Level)		UWI: SE/SW/0/9/S/21/E/25/0/0/26/PM/S/1156/W/0/2595/0/0			

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (ft)	Operation
	6:00 - 16:30	10.50	DRLPRO	02	D	P		DRILLED 4439'-5477', 1038' IN 10.5 HRS, 98.9 FPH. MADE 6 SLIDES, 108' TOTAL FOOTAGE IN 2.75 HOURS TOTAL SLIDE TIME. WOB WAS 15-18K, PUMP #1 AT 110 SPM, 495 GPM, MOTOR TURNING AT 114 RPM WITH TOP DRIVE AT 45 RPM FOR A TOTAL OF 159 RPM AT THE BIT. DIFFERENTIAL PRESSURE WAS 350-450 PSI. ON/OFF BOTTOM PUMP PRESSURE WAS 2100/1700 PSI. ON/OFF BOTTOM TORQUE WAS 10/10K. PU/SO/ROT WAS 170/110/145. CIRCULATING THE RESERVE PIT, SLIGHT LOSSES.
	16:30 - 17:00	0.50	DRLPRO	07	A	P		RIG SERVICE
	17:00 - 18:30	1.50	DRLPRO	02	D	P		DRILLED 5477'-5750', 273' IN 1.5 HRS, 182 FPH. 100% ROTATING. SAME PARAMETERS AS ABOVE.
	18:30 - 19:00	0.50	DRLPRO	05	B	P		LOST RETURNS, PUMPED 80 BBLS, 25% LCM SWEEP, GOT 100% RETURNS BACK.
	19:00 - 0:00	5.00	DRLPRO	02	D	P		DRILLED 5750'-6422', 672' IN 5 HRS, 134.4 FPH. 100% ROTATING. WOB WAS 15-20K, PUMP #1 AT 110 SPM, 495 GPM, MOTOR TURNING AT 114 RPM WITH TOP DRIVE AT 45 RPM FOR A TOTAL OF 159 RPM AT THE BIT. DIFFERENTIAL PRESSURE WAS 350-450 PSI. ON/OFF BOTTOM PUMP PRESSURE WAS 2250/1820 PSI. ON/OFF BOTTOM TORQUE WAS 10/10K. PU/SO/ROT WAS 190/130/149. STARTED MUDDING UP AT 5995', MW IS 9.1 PPG, 36 VIS WITH 2% LCM.
2/9/2011	0:00 - 6:00	6.00	DRLPRO	02	D	P		DRILLED 6422'-6799', 377' IN 6 HRS, 62.8 FPH. MADE 1 SLIDE, 25 TOTAL FEET IN 1 HOUR. WOB WAS 15-20K, PUMP #1 AT 110 SPM, 495 GPM, MOTOR TURNING AT 114 RPM WITH TOP DRIVE AT 45 RPM FOR A TOTAL OF 159 RPM AT THE BIT. DIFFERENTIAL PRESSURE WAS 350-450 PSI. ON/OFF BOTTOM PUMP PRESSURE WAS 2250/2000 PSI. ON/OFF BOTTOM TORQUE WAS 9/9K. PU/SO/ROT WAS 195/135/153. MW IS 9.7 PPG, 35 VIS WITH 2% LCM. SLIGHT LOSSES.
	6:00 - 17:30	11.50	DRLPRO	02	D	P		DRILLED 6799'-7365', 566' IN 11.5 HRS, 49.2 FPH. MADE ONE SLIDE, 25' IN 1.83 HOURS. WOB WAS 15-20K, PUMP #1 AT 110 SPM, 495 GPM, MOTOR TURNING AT 114 RPM WITH TOP DRIVE AT 45 RPM FOR A TOTAL OF 159 RPM AT THE BIT. DIFFERENTIAL PRESSURE WAS 350-450 PSI. ON/OFF BOTTOM PUMP PRESSURE WAS 2750/2450 PSI. ON/OFF BOTTOM TORQUE WAS 8/10K. PU/SO/ROT WAS 215/135/161. MW IS 10.3 PPG, 37 VIS WITH 5% LCM.
	17:30 - 18:00	0.50	DRLPRO	07	A	P		RIG SERVICE.
	18:00 - 0:00	6.00	DRLPRO	02	D	P		DRILLED 7365'-7632', 267' IN 6 HRS, 44.5 FPH. MADE 1 SLIDE, 15 TOTAL FEET IN 35 MINUTES. WOB WAS 15-20K, PUMP #1 AT 90 SPM, 405 GPM, MOTOR TURNING AT 93 RPM WITH TOP DRIVE AT 45 RPM FOR A TOTAL OF 138 RPM AT THE BIT. DIFFERENTIAL PRESSURE WAS 300-400 PSI. ON/OFF BOTTOM PUMP PRESSURE WAS 2300/1880 PSI. ON/OFF BOTTOM TORQUE WAS 9/8K. PU/SO/ROT WAS 215/135/161. MW IS 10.5 PPG, 37 VIS WITH 7% LCM.

**US ROCKIES REGION**  
**Operation Summary Report**

Well: NBU 921-2504BS RED		Spud Conductor: 1/4/2011		Spud Date: 1/13/2011	
Project: UTAH-UINTAH		Site: NBU 921-25N PAD		Rig Name No: H&P 311/311, CAPSTAR 310/310	
Event: DRILLING		Start Date: 1/2/2011		End Date: 2/15/2011	
Active Datum: RKB @4,980.00ft (above Mean Sea Level)		UWI: SE/SW/0/9/S/21/E/25/0/0/26/PM/S/1156/W/0/2595/0/0			

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (ft)	Operation
2/10/2011	0:00 - 6:00	6.00	DRLPRO	02	D	P		DRILLED 7632'-7899', 267' IN 6 HRS, 44.5 FPH. 100% ROTATING. WOB WAS 18-22K, PUMP #1 AT 90 SPM, 405 GPM, MOTOR TURNING AT 93 RPM WITH TOP DRIVE AT 45 RPM FOR A TOTAL OF 138 RPM AT THE BIT. DIFFERENTIAL PRESSURE WAS 300-400 PSI. ON/OFF BOTTOM PUMP PRESSURE WAS 2300/1880 PSI. ON/OFF BOTTOM TORQUE WAS 9/8K. PU/SO/ROT WAS 220/140/166. MW IS 10.7 PPG, 37 VIS WITH 8% LCM.
	6:00 - 15:30	9.50	DRLPRO	02	D	P		DRILLED 7899'-8308', 409' IN 9.5 HRS, 43 FPH. MADE 1 SLIDE, 25 TOTAL FEET IN 1.25 TOTAL HOURS. WOB WAS 20-23K, PUMP #1 AT 90 SPM, 405 GPM, MOTOR TURNING AT 93 RPM WITH TOP DRIVE AT 45 RPM FOR A TOTAL OF 138 RPM AT THE BIT. DIFFERENTIAL PRESSURE WAS 300-400 PSI. ON/OFF BOTTOM PUMP PRESSURE WAS 2400/1950 PSI. ON/OFF BOTTOM TORQUE WAS 12/13K. PU/SO/ROT WAS 245/138/175. MW IS 11.5 PPG, 37 VIS WITH 10% LCM.
	15:30 - 16:00	0.50	DRLPRO	07	A	P		RIG SERVICE.
	16:00 - 0:00	8.00	DRLPRO	02	D	P		DRILLED 8308'-8617', 309' IN 8 HRS, 38.6 FPH. MADE 1 BRUTAL SLIDE, 21 TOTAL FEET IN 1.75 TOTAL HOURS. WOB WAS 20-23K, PUMP #1 AT 90 SPM, 405 GPM, MOTOR TURNING AT 93 RPM WITH TOP DRIVE AT 45 RPM FOR A TOTAL OF 138 RPM AT THE BIT. DIFFERENTIAL PRESSURE WAS 300-400 PSI. ON/OFF BOTTOM PUMP PRESSURE WAS 2500/2020 PSI. ON/OFF BOTTOM TORQUE WAS 13/13K. PU/SO/ROT WAS 250/143/177. MW IS 11.8 PPG, 41 VIS WITH 10% LCM. SLIGHT LOSSES.
2/11/2011	0:00 - 10:00	10.00	DRLPRO	02	D	P		DRILLED 8617'-9000', 383' IN 10 HRS, 38.3 FPH. 100% ROTATING. WOB WAS 20-23K, PUMP #1 AT 90 SPM, 405 GPM, MOTOR TURNING AT 93 RPM WITH TOP DRIVE AT 45 RPM FOR A TOTAL OF 138 RPM AT THE BIT. DIFFERENTIAL PRESSURE WAS 300-400 PSI. ON/OFF BOTTOM PUMP PRESSURE WAS 2600/2100 PSI. ON/OFF BOTTOM TORQUE WAS 13/13K. PU/SO/ROT WAS 260/153/187. MW IS 12.1 PPG, 41 VIS WITH 8% LCM. SLIGHT LOSSES.
	10:00 - 11:00	1.00	DRLPRO	05	C	P		CIRCULATED BOTTOMS UP. MW IS 12.1 PPG, 42 VIS WITH 8% LCM. FLOW CHECK WELL.
	11:00 - 16:00	5.00	DRLPRO	06	A	P		PUMPED 3 STANDS OUT, STARTED PULLING EASY. PUMP SLUG AND TRIP OUT OF THE HOLE. HAD 40,000 LBS OVERPULL UNTIL 4000', THEN HAD NO OVERPULL. FLOW CHECKED WELL AT CASING SHOE.
	16:00 - 17:00	1.00	DRLPRO	06	A	P		PULLED EFIELD TOOL, RACKED DIRECTIONAL TOOLS BACK. BROKE BIT OFF AND LD MUD MOTOR.
	17:00 - 19:00	2.00	DRLPRO	06	A	P		CHECKED ALIGNMENT OF THE RIG. DRAINED STACK AND SET PLUMB BOB FROM ROTARY TABLE TO WELLHEAD. PLUMB BOB NOT CENTERED IN CASING. SKIDDED RIG FORWARD TO ALIGN RIG. CHECK ALIGNMENT WITH PLUMB BOB AGAIN-GOOD.
	19:00 - 21:00	2.00	DRLPRO	06	A	P		MADE UP HUGHES Q506F BIT, SERIAL #7019036 W/6-16S, MONEL COLLAR AND A SDI .14 RPG, 7:8, 3.3 STRAIGHT MUD MOTOR. PUMP THRU MOTOR AT SURFACE AND BLOW DOWN.
	21:00 - 0:00	3.00	DRLPRO	06	A	P		TRIP IN THE HOLE, FILL AT 2600', 5500'.

**US ROCKIES REGION**  
**Operation Summary Report**

Well: NBU 921-2504BS RED	Spud Conductor: 1/4/2011	Spud Date: 1/13/2011
Project: UTAH-UINTAH	Site: NBU 921-25N PAD	Rig Name No: H&P 311/311, CAPSTAR 310/310
Event: DRILLING	Start Date: 1/2/2011	End Date: 2/15/2011
Active Datum: RKB @4,980.00ft (above Mean Sea Level)		
UWI: SE/SW/0/9/S/21/E/25/0/0/26/PM/S/1156/W/0/2595/0/0		

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (ft)	Operation
2/12/2011	0:00 - 3:00	3.00	DRLPRO	06	A	P		CONTINUED TRIPPING IN THE HOLE, NO TITE SPOTS. FILLED AT 7500'.
	3:00 - 5:30	2.50	DRLPRO	06	A	P		WASHED AND REAMED FROM 8344'-9000', NOT REAL HARD REAMING. NO FILL. NEVER SAW ANY BOTTOMS UP GAS.
	5:30 - 15:00	9.50	DRLPRO	02	D	P		DRILLED 9000'-9382', 382' IN 9.5 HRS, 40.2 FPH. WOB WAS 22-24K, PUMP #1 AT 110 SPM, 495 GPM, MOTOR TURNING AT 69 RPM WITH TOP DRIVE AT 45 RPM FOR A TOTAL OF 114 RPM AT THE BIT. DIFFERENTIAL PRESSURE WAS 300-400 PSI. ON/OFF BOTTOM PUMP PRESSURE WAS 2600/2100 PSI. ON/OFF BOTTOM TORQUE WAS 13/13K. PU/SO/ROT WAS 250/143/181. MW IS 12.3 PPG, 43 VIS WITH 10% LCM. NO LOSSES. RIG SERVICE.
	15:00 - 15:30	0.50	DRLPRO	07	A	P		
	15:30 - 21:30	6.00	DRLPRO	02	D	P		DRILLED 9382'-9685', 303' IN 6 HRS, 50.5 FPH. WOB WAS 22-24K, PUMP #1 AT 110 SPM, 495 GPM, MOTOR TURNING AT 69 RPM WITH TOP DRIVE AT 45 RPM FOR A TOTAL OF 114 RPM AT THE BIT. DIFFERENTIAL PRESSURE WAS 300-400 PSI. ON/OFF BOTTOM PUMP PRESSURE WAS 3000/2700 PSI. ON/OFF BOTTOM TORQUE WAS 13/13K. PU/SO/ROT WAS 257/150/187. MW IS 12.5 PPG, 44 VIS WITH 10% LCM. NO LOSSES. CIRCULATE AND CONDITION MUD, CIRCULATED 2 BOTTOMS UP, NO GAS. FINAL MW WAS 12.5 PPG, 44 VIS WITH 10% LCM. FLOW CHECKED WELL, NO FLOW.
	21:30 - 23:30	2.00	DRLPRO	05	C	P		STRAIGHT PULLED 5 STDs THEN PUMPED SLUG. TRIP OUT OF HOLE.
	23:30 - 0:00	0.50	DRLPRO	06	E	P		
	0:00 - 9:30	9.50	DRLPRO	06	E	P		WIPER TRIP TO THE SHOE, FLOW CHECKED AT THE SHOE. NO TITE SPOTS, OVERPULLS OR WASHING/REAMING. NO FILL.
	9:30 - 12:00	2.50	DRLPRO	05	C	P		CIRCULATE AND CONDITIONED MUD. CIRCULATED 2 BOTTOMS UP, NO GAS. MW WAS 12.5 PPG, 41 VIS WITH 10% LCM.
	12:00 - 12:30	0.50	DRLPRO	10	B	P		DROPPED SURVEY TOOL AND FLOW CHECKED WELL, NO FLOW.
2/13/2011	12:30 - 18:00	5.50	DRLPRO	06	B	P		TRIPPED OUT OF THE HOLE, NO TITE SPOTS OR OVER PULLS. FLOW CHECKED WELL AT THE SHOE. PULLED ROTATING HEAD AND INSTALLED A TRIP NIPPLE. BROKE BIT OFF, PU A JOINT OF DP AND RACKED BACK MONEL AND STRAIGHT MUD MOTOR. RECOVERED SURVEY TOOL, MISRUN.
	18:00 - 0:00	6.00	DRLPRO	11	D	P		RIGGED UP HALLIBURTON AND RAN TRIPLE COMBO LOG SWEEP. LOGGERS TD WAS 9682' (DRILLERS 9685'), BHT WAS 180 DEGREES. BASE OF SURFACE CASING WAS 2584'. RAN SPECTRAL DENSITY LOG FROM TD TO BASE OF SURFACE CASING, RAN DUAL SPACED NEUTRON FROM TD TO SURFACE CASING. RAN AN ARRAY COMPENSATED TRUE RESISTIVITY FROM TD TO SURFACE SHOE. RAN A CALIPER LOG FROM TD TO SURFACE CASING SHOE AND A GAMMA RAY FROM TD TO 200'. RAN BOREHOLE VOLUME LOG. NO TITE SPOTS WENT STRAIGHT TO BOTTOM.
	0:00 - 2:30	2.50	CSG	08	A	Z		DRAWWORKS FROZEN/THAW RESISTOR GRID.
	2:30 - 3:00	0.50	CSG	06	D	P		PULL WEAR BUSHING.
2/14/2011	3:00 - 3:30	0.50	CSG	07	A	P		RIG SERVICE
	3:30 - 4:00	0.50	CSG	08	A	Z		THAW RESISTOR GRID AGAIN.

**US ROCKIES REGION**  
**Operation Summary Report**

Well: NBU 921-2504BS RED		Spud Conductor: 1/4/2011	Spud Date: 1/13/2011
Project: UTAH-UINTAH		Site: NBU 921-25N PAD	Rig Name No: H&P 311/311, CAPSTAR 310/310
Event: DRILLING		Start Date: 1/2/2011	End Date: 2/15/2011
Active Datum: RKB @4,980.00ft (above Mean Sea Level)		UWI: SE/SW/0/9/S/21/E/25/0/0/26/PM/S/1156/W/0/2595/0/0	

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (ft)	Operation
	4:00 - 7:00	3.00	CSG	12	A	P		RIG UP CASING CREW AND EQUIPMENT. CHANGED OUT BALES AND ELEVATORS.
	7:00 - 14:00	7.00	CSG	12	C	P		MADE UP WITH THREAD LOCK, SHOE, SHOE TRACK AND FLOAT COLLAR. INSTALLED CENTRALIZER ON SHOE TRACK. RAN 229 JTS OF 4.5", I80, 11.6#, LT&C, R3. SET 21' MARKER JOINTS AT 7356' AND 4721'. SET CASING AT 9672' WITH FLOAT COLLAR AT 9630'. FILLED AND CIRCULATE CASING AT THE SURFACE CASING SHOE, 4659' AND 7505'.
	14:00 - 15:30	1.50	CSG	12	F	P		FILLED PIPE AND STARTED CIRCULATING WELL. RD CASING CREW AND EQUIPMENT, RIGGING UP CEMENTERS. CIRCULATING WITH FULL RETURNS AT 360 GPM (8 BPM) AT 1050 PSI. NEVER SAW ANY BOTTOMS UP GAS, MW IS 12.5 PPG, 43 VIS WITH 10% LCM.
	15:30 - 17:30	2.00	CSG	12	E	P		PRESSURE TESTED LINES TO 5000 PSI. PUMPED 40 BBLS OF H2O SPACER AHEAD, PUMPED 186.6 BBLS (530 SX OF 12.5#, 1.98 CFT/SX, 10.71 GAL/SK) LEAD ECONO CEMENT. PUMPED 256 BBLS (1150 SX OF 14.3#, 1.25 YD, 5.41 GAL/SK) POZ PREMIUM 50/50 TAIL CEMENT. SHUT DOWN AND WASHED LINES, DROP 4.5" TOP PLUG, PUMP 149.3 BBLS OF H2O TREATED WITH BIOCIDES AND CLAY INHIBITOR. BUMPED PLUG AT 2200 PSI, PRESSURED UP CSG TO 2910 PSI AND HELD FOR 5 MIN. RELEASED PRESSURE AND FLOATS HELD, FLOWED BACK 1.75 BBLS. EST TOC TAIL @ 4300', LEAD @ 900'. HAD 100% RETURNS, HAD +/- 5 BBLS SPACER WATER BACK TO SURFACE.
	17:30 - 18:30	1.00	CSG	12	B	P		HELD SAFETY MEETING AND RIGGED DOWN CEMENTERS.
	18:30 - 21:30	3.00	CSG	12	C	P		ND BOPE, PICK UP BOP STACK AND SET C22 SLIPS WITH 100K. CUT OFF CASING AND LD JOINT.
	21:30 - 22:30	1.00	CSG	01	C	P		PREPARE RIG TO SKID. RELEASED RIG AT 2230 HRS ON MONDAY FEBRUARY 14TH.

**US ROCKIES REGION**  
**Operation Summary Report**

Well: NBU 921-25O4BS RED		Spud Conductor: 1/4/2011	Spud Date: 1/13/2011
Project: UTAH-UINTAH	Site: NBU 921-25N PAD		Rig Name No: H&P 311/311, CAPSTAR 310/310
Event: DRILLING	Start Date: 1/2/2011	End Date: 2/15/2011	
Active Datum: RKB @4,980.00ft (above Mean Sea Level)		UWI: SE/SW/0/9/S/21/E/25/0/0/26/PM/S/1156/W/0/2595/0/0	

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (ft)	Operation
	22:30 - 22:30	0.00	CSG					<p>CONDUCTOR CASING: Cond. Depth set: 40 Cement sx used: 28</p> <p>SPUD DATE/TIME: 1/13/2011 3:30</p> <p>SURFACE HOLE: 11 Surface From depth: 40 Surface To depth: 2,695 Total SURFACE hours: 27.00 Surface Casing size: 8 5/8 # of casing joints ran: 58 Casing set MD: 2,562.0 # sx of cement: 225+200 Cement blend (ppg): 15.9/15.8 Cement yield (ft3/sk): 1.15 # of bbls to surface: 0 Describe cement issues: NONE Describe hole issues: NONE</p> <p>PRODUCTION: Rig Move/Skid start date/time: 2/1/2011 18:00 Rig Move/Skid finish date/time: 2/6/2011 6:00 Total MOVE hours: 108.0 Prod Rig Spud date/time: 2/7/2011 15:30 Rig Release date/time: 2/14/2011 22:30 Total SPUD to RR hours: 175.0 Planned depth MD 9,716 Planned depth TVD 9,532 Actual MD: 9,685 Actual TVD: 9,540 Open Wells \$: \$971,678 AFE \$: \$773,711 Open wells \$/ft: \$100.33</p> <p>PRODUCTION HOLE: 7.875 Prod. From depth: 2,611 Prod. To depth: 9,685 Total PROD hours: 102 Log Depth: 9682 Float Collar Top Depth: 9630 Production Casing size: 4 1/2 # of casing joints ran: 229 Casing set MD: 9,672.0 # sx of cement: 530+1150=1680 Cement blend (ppg): 12.5/14.3 Cement yield (ft3/sk): 1.98/1.25 Est. TOC (Lead &amp; Tail) or 2 Stage : LEAD@900', TAIL@4300' Describe cement issues: NONE Describe hole issues: NONE</p> <p>DIRECTIONAL INFO: KOP: 292 Max angle: 19.01@3246' Departure: 1160'@9685' Max dogleg MD: 2.45@5512'</p>



## 1 General

### 1.1 Customer Information

Company	US ROCKIES REGION
Representative	
Address	

### 1.2 Well Information

Well	NBU 921-25O4BS RED		
Common Name	NBU 921-25O4BS		
Well Name	NBU 921-25O4BS	Wellbore No.	OH
Report No.	1	Report Date	4/14/2011
Project	UTAH-UINTAH	Site	NBU 921-25N PAD
Rig Name/No.		Event	COMPLETION
Start Date	4/14/2011	End Date	5/4/2011
Spud Date	1/13/2011	Active Datum	RKB @4,980.00ft (above Mean Sea Level)
UWI	SE/SW/0/9/S/21/E/25/0/0/26/PM/S/1156/W/0/2595/0/0		

### 1.3 General

Contractor	CASEDHOLE SOLUTIONS	Job Method	PERFORATE	Supervisor	DAVE DANIELS
Perforated Assembly	PRODUCTION CASING	Conveyed Method	WIRELINE		

### 1.4 Initial Conditions

### 1.5 Summary

Fluid Type		Fluid Density		Gross Interval	7,486.0 (ft)-9,540.0 (ft)	Start Date/Time	4/25/2011 12:00AM
Surface Press		Estimate Res Press		No. of Intervals	25	End Date/Time	4/25/2011 12:00AM
TVD Fluid Top		Fluid Head		Total Shots	163	Net Perforation Interval	43.00 (ft)
Hydrostatic Press		Press Difference		Avg Shot Density	3.79 (shot/ft)	Final Surface Pressure	
Balance Cond	NEUTRAL					Final Press Date	

## 2 Intervals

### 2.1 Perforated Interval

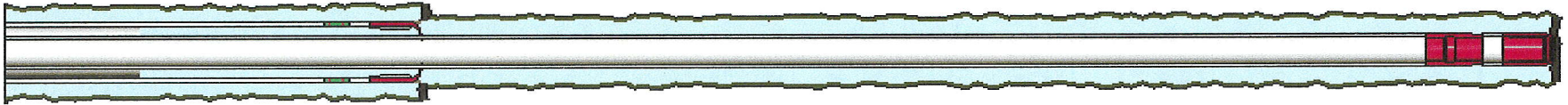
Date	Formation/ Reservoir	CCL@ (ft)	CCL-T S (ft)	MD Top (ft)	MD Base (ft)	Shot Density (shot/ft)	Misfires/ Add. Shot	Diameter (in)	Carr Type /Carr Manuf	Carr Size (in)	Phasing (°)	Charge Desc /Charge Manufacturer	Charge Weight (gram)	Reason	Misrun
12:00AM	MESAVERDE/			7,486.0	7,488.0	4.00		0.360	EXP/	3.375	90.00		23.00	PRODUCTIO N	

## 2.1 Perforated Interval (Continued)

Date	Formation/ Reservoir	CCL@ (ft)	CCL-T S (ft)	MD Top (ft)	MD Base (ft)	Shot Density (shot/ft)	Misfires/ Add. Shot	Diameter (in)	Carr Type /Carr Manuf	Carr Size (in)	Phasing (°)	Charge Desc /Charge Manufacturer	Charge Weight (gram)	Reason	Misrun
12:00AMMESAVERDE/				7,504.0	7,506.0	4.00		0.360	EXP/	3.375	90.00		23.00	PRODUCTION	
12:00AMMESAVERDE/				7,555.0	7,557.0	4.00		0.360	EXP/	3.375	90.00		23.00	PRODUCTION	
12:00AMMESAVERDE/				7,631.0	7,635.0	4.00		0.360	EXP/	3.375	90.00		23.00	PRODUCTION	
12:00AMMESAVERDE/				7,698.0	7,700.0	4.00		0.360	EXP/	3.375	90.00		23.00	PRODUCTION	
12:00AMMESAVERDE/				8,130.0	8,131.0	4.00		0.360	EXP/	3.375	90.00		23.00	PRODUCTION	
12:00AMMESAVERDE/				8,146.0	8,147.0	4.00		0.360	EXP/	3.375	90.00		23.00	PRODUCTION	
12:00AMMESAVERDE/				8,207.0	8,208.0	4.00		0.360	EXP/	3.375	90.00		23.00	PRODUCTION	
12:00AMMESAVERDE/				8,248.0	8,249.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTION	
12:00AMMESAVERDE/				8,259.0	8,260.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTION	
12:00AMMESAVERDE/				8,274.0	8,275.0	4.00		0.360	EXP/	3.375	90.00		23.00	PRODUCTION	
12:00AMMESAVERDE/				8,372.0	8,374.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTION	
12:00AMMESAVERDE/				8,420.0	8,421.0	4.00		0.360	EXP/	3.375	90.00		23.00	PRODUCTION	
12:00AMMESAVERDE/				8,426.0	8,429.0	4.00		0.360	EXP/	3.375	90.00		23.00	PRODUCTION	
12:00AMMESAVERDE/				8,640.0	8,643.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTION	
12:00AMMESAVERDE/				8,698.0	8,700.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTION	
12:00AMMESAVERDE/				8,760.0	8,762.0	4.00		0.360	EXP/	3.375	90.00		23.00	PRODUCTION	
12:00AMMESAVERDE/				8,968.0	8,969.0	4.00		0.360	EXP/	3.375	90.00		23.00	PRODUCTION	
12:00AMMESAVERDE/				9,044.0	9,046.0	4.00		0.360	EXP/	3.375	90.00		23.00	PRODUCTION	
12:00AMMESAVERDE/				9,090.0	9,091.0	4.00		0.360	EXP/	3.375	90.00		23.00	PRODUCTION	
12:00AMMESAVERDE/				9,159.0	9,160.0	4.00		0.360	EXP/	3.375	90.00		23.00	PRODUCTION	
12:00AMMESAVERDE/				9,171.0	9,172.0	4.00		0.360	EXP/	3.375	90.00		23.00	PRODUCTION	

**2.1 Perforated Interval (Continued)**

Date	Formation/ Reservoir	CCL@ (ft)	CCL-T S (ft)	MD Top (ft)	MD Base (ft)	Shot Density (shot/ft)	Misfires/ Add. Shot	Diamete r (in)	Carr Type /Carr Manuf	Carr Size (in)	Phasing (°)	Charge Desc /Charge Manufacturer	Charge Weight (gram)	Reason	Misrun
12:00AM	MESAVERDE/			9,404.0	9,405.0	4.00		0.360	EXP/	3.375	90.00		23.00	PRODUCTIO N	
12:00AM	MESAVERDE/			9,444.0	9,447.0	4.00		0.360	EXP/	3.375	90.00		23.00	PRODUCTIO N	
12:00AM	MESAVERDE/			9,538.0	9,540.0	4.00		0.360	EXP/	3.375	90.00		23.00	PRODUCTIO N	

**3 Plots****3.1 Wellbore Schematic**

# US ROCKIES REGION

## Operation Summary Report

Well: NBU 921-2504BS RED	Spud Conductor: 1/4/2011	Spud Date: 1/13/2011
Project: UTAH-UINTAH	Site: NBU 921-25N PAD	Rig Name No: SWABBCO 8/8
Event: COMPLETION	Start Date: 4/14/2011	End Date: 5/4/2011
Active Datum: RKB @4,980.00ft (above Mean Sea Level)	UWI: SE/SW/0/9/S/21/E/25/0/0/26/PM/S/1156/W/0/2595/0/0	

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (ft)	Operation
4/21/2011	7:00 - 7:15	0.25	COMP	48		P		HSM. HIGH PSI LINES & WL SAFETY.
	7:15 - 18:00	10.75	COMP	33	C	P		MIRU B&C QUICK TEST. PSI TEST CSG & BOTH FRAC VALVE T/ 1000 PSI FOR 15 MIN. LOST 13 PSI. PSI TEST T/ 3500 PSI FOR 15 MIN. LOST 21 PSI. PSI TEST T/ 7000 PSI FOR 30 MIN. LOST 52 PSI. BLEED OFF PSI. SWIFWE.
4/25/2011	7:00 - 15:00	8.00	COMP	36	B	P		PERF STG 1)PU 3 1/8 EXP GUN, 23 GM, .36 HOLE SIZE. 90 DEG PHASING. RIH PERF AS PER STG 1 PERF DESIGN.
4/26/2011	6:45 - 7:00	0.25	COMP	48		P		HSM, HIGH PSI LINES & WL SAFETY.
	7:00 - 18:00	11.00	COMP	36	B	P		FRAC STG 1)WHP 1472 PSI, BRK 3635 PSI @ 4.4 BPM. ISIP 2878 PSI, FG .74. PUMP 100 BBLS @ 39.5 BPM @ 6273 PSI = 60% HOLES OPEN. ISIP 2935 PSI, FG .75, NPI 57 PSI. MP 6675 PSI, MR 45.9 BPM, AP 6360 PSI, AR 39.6 BPM, PMP 894 BBLS SW & 9111 LBS OF 30/50 SND & 5064 LBS OF 20/40 SLC SND. TOTAL PROP 14,175 LBS. SWI, X-OVER FOR WL.
								PERF STG 2)PU 4 1/2 8K HAL CBP & 3 1/8 EXP GUN, 23 GM, .36 HOLE SIZE. 90 DEG PHASING. RIH SET CBP @ 9222' P/U PERF AS PER STG 2 PERF PROC. POOH.
								FRAC STG 2)WHP 1208 PSI, BRK 2555 PSI @ 6.8 BPM. ISIP 2094 PSI, FG .67. PUMP 100 BBLS @ 46 BPM @ 5429 PSI = 75% HOLES OPEN. ISIP 2758 PSI, FG .74, NPI 664 PSI. MP 6597 PSI, MR 50.3 BPM, AP 5578 PSI, AR 48.7 BPM, PMP 581 BBLS SW & 5613 LBS OF 30/50 SND & 5370 LBS OF 20/40 SLC SND. TOTAL PROP 10,983 LBS. SWI, X-OVER FOR WL.
								PERF STG 3)PU 4 1/2 8K HAL CBP & 3 1/8 EXP GUN, 23 GM, .36 HOLE SIZE. 90 & 120 DEG PHASING. RIH SET CBP @ 8812' P/U PERF AS PER STG 3 PERF DESIGN. POOH.
								FRAC STG 3)WHP 1025 PSI, BRK 2343 PSI @ 3.8 BPM. ISIP 1592 PSI, FG .62. PUMP 100 BBLS @ 52.5 BPM @ 5707 PSI = 79% HOLES OPEN. ISIP 2647 PSI, FG .74, NPI 1055 PSI. MP 6712 PSI, MR 53.4 BPM, AP 5505 PSI, AR 52.2 BPM, PMP 993 BBLS SW & 16,464 LBS OF 30/50 SND & 4271 LBS OF 20/40 SLC SND. TOTAL PROP 20,735 LBS. SWI, X-OVER FOR WL.
								PERF STG 4)PU 4 1/2 8K HAL CBP & 3 1/8 EXP GUN, 23 GM, .36 HOLE SIZE. 90 & 120 DEG PHASING. RIH SET CBP @ 8479' P/U PERF AS PER STG 4 PERF DESIGN. POOH.

**US ROCKIES REGION**  
**Operation Summary Report**

Well: NBU 921-25O4BS RED		Spud Conductor: 1/4/2011	Spud Date: 1/13/2011
Project: UTAH-UINTAH		Site: NBU 921-25N PAD	Rig Name No: SWABBCO 8/8
Event: COMPLETION		Start Date: 4/14/2011	End Date: 5/4/2011
Active Datum: RKB @4,980.00ft (above Mean Sea Level)		UWI: SE/SW/0/9/S/21/E/25/0/0/26/PM/S/1156/W/0/2595/0/0	

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (ft)	Operation
4/27/2011	7:45 - 18:00	10.25	COMP	36	B	P		<p>FRAC STG 4)WHP 1430 PSI, BRK 3165 PSI @ 4.7 BPM. ISIP 2206 PSI, FG .70. PUMP 100 BBLS @ 44.7 BPM @ 5572 PSI = 76% HOLES OPEN. ISIP 2705 PSI, FG .76, NPI 499 PSI. MP 6561 PSI, MR 51.8 BPM, AP 5474 PSI, AR 50.9 BPM, PMP 605 BBLS SW &amp; 6173 LBS OF 30/50 SND &amp; 4994 LBS OF 20/40 SLC SND. TOTAL PROP 11,167 LBS. SWI, X-OVER FOR WL.</p> <p>PERF STG 5)PU 4 1/2 8K HAL CBP &amp; 3 1/8 EXP GUN, 23 GM, .36 HOLE SIZE. 90 &amp; 120 DEG PHASING. RIH SET CBP @ 8320'. PERF AS PER STG 5 PERF DESIGN. POOH.</p> <p>FRAC STG 5) PUMPED 13 BBLS OF PAD. HAD T/ SHUT DOWN T/ FIX LEAK ON FRAC LINE BELOW N2 POP-OFF. ( 1 hr 4 min DOWN TIME. ) WHP 1586 PSI, BRK 3146 PSI @ 4.4 BPM. ISIP 2050 PSI, FG .69. PUMP 100 BBLS @ 51 BPM @ 5909 PSI = 82% HOLES OPEN. ISIP 2525 PSI, FG .75, NPI 475 PSI. MP 6444 PSI, MR 51.8 BPM, AP 5156 PSI, AR 51 BPM, PMP 756 BBLS SW &amp; 8939 LBS OF 30/50 SND &amp; 4896 LBS OF 20/40 SLC SND. TOTAL PROP 13,835 LBS. SWI, X-OVER FOR WL.</p> <p>PERF STG 6)PU 4 1/2 8K HAL CBP &amp; 3 1/8 EXP GUN, 23 GM, .36 HOLE SIZE. 90 DEG PHASING. RIH SET CBP @ 7750'. PERF AS PER STG 6 PERF DESIGN. POOH.</p> <p>FRAC STG 6)WHP 1176 PSI, BRK 2509 PSI @ 3.9 BPM. ISIP 1930 PSI, FG .69. PUMP 100 BBLS @ 49.9 BPM @ 5305 PSI = 79% HOLES OPEN. ISIP 2187 PSI, FG .72, NPI 257 PSI. MP 5436 PSI, MR 50.5 BPM, AP 4448 PSI, AR 50.1 BPM, PMP 799 BBLS SW &amp; 10,535 LBS OF 30/50 SND &amp; 6166 LBS OF 20/40 SLC SND. TOTAL PROP 16,701 LBS. SWI, X-OVER FOR WL.</p> <p>PERF STG 7)PU 4 1/2 8K HAL CBP &amp; 3 1/8 EXP GUN, 23 GM, .36 HOLE SIZE. 90 DEG PHASING. RIH SET CBP @ 7587'. PERF AS PER STG 7 PERF DESIGN. POOH.</p>

**US ROCKIES REGION**  
**Operation Summary Report**

Well: NBU 921-2504BS RED		Spud Conductor: 1/4/2011	Spud Date: 1/13/2011
Project: UTAH-UINTAH		Site: NBU 921-25N PAD	Rig Name No: SWABBCO 8/8
Event: COMPLETION		Start Date: 4/14/2011	End Date: 5/4/2011
Active Datum: RKB @4,980.00ft (above Mean Sea Level)		UWI: SE/SW/0/9/S/21/E/25/0/0/26/PM/S/1156/W/0/2595/0/0	

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (ft)	Operation
4/28/2011	9:00 - 18:00	9.00	COMP	36	B	P		FRAC STG 7)WHP 998 PSI, BRK 2857 PSI @ 3.9 BPM. ISIP 1561 PSI, FG .65. PUMP 100 BBLS @ 50.9 BPM @ 4365 PSI = 95% HOLES OPEN. ISIP 2388 PSI, FG .76, NPI 827 PSI. MP 5000 PSI, MR 51.5 BPM, AP 4211 PSI, AR 49.7 BPM, PMP 1486 BBLS SW & 26,994 LBS OF 30/50 SND & 5080 LBS OF 20/40 SLC SND. TOTAL PROP 32,074 LBS. SWI, X-OVER FOR WL.  PU 4 1/2 8K HAL CBP. RIH SET CBP @ 7436'. POOH. DONE FRACING THIS WELL.  TOTAL SAND = 119,670 LBS TOTAL CLFL = 6114 BBLS TOTAL SCALE = 674 GAL TOTAL BIO =160 GAL  HSM, MOVING RIG & EQUIP
5/3/2011	7:00 - 7:30	0.50	COMP	48		P		MIRU F/ NBU 920-12K, ND WH NU BOPS, RU FLOOR & TBG EQUIP.
	7:30 - 10:30	3.00	COMP	30	A	P		PU 37/8 BIT, POBS & 234 JTS 23/8 L-80 OFF FLOAT EOT @ 7427 ' RU DRLG EQUIP, CHANGED OUT PIPE RAMS IN BOPS, BROKE CIRC CONVENTIONAL, TEST BOPS TO 3,000# FOR 15 MIN LOST 30 # RIH.
	10:30 - 15:00	4.50	COMP	31	I	P		C/O 15' SAND TAG 1ST PLUG @ 7436' DRL PLG IN 6 MIN 600# PSI INCREASE RIH.
	15:00 - 17:00	2.00	COMP	44	C	P		C/O 30' SAND TAG 2ND PLUG @ 7587' DRL PLG IN 4 MIN 200# PSI INCREASE RIH  C/O 30' SAND TAG 3RD PLUG @ 7730' DRL PLG IN 6 MIN 700# PSI INCREASE RIH 1 JT EOT @ 7776 ' SWI LOCK RAMS SDFN HSM, DRILLING PLUGS & LANDING TBG.
5/4/2011	7:00 - 7:30	0.50	COMP	48		P		



**US ROCKIES REGION**  
**Operation Summary Report**

Well: NBU 921-2504BS RED		Spud Conductor: 1/4/2011	Spud Date: 1/13/2011
Project: UTAH-UINTAH	Site: NBU 921-25N PAD		Rig Name No: SWABBCO 8/8
Event: COMPLETION	Start Date: 4/14/2011	End Date: 5/4/2011	
Active Datum: RKB @4,980.00ft (above Mean Sea Level)		UWI: SE/SW/0/9/S/21/E/25/0/0/26/PM/S/1156/W/0/2595/0/0	

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (ft)	Operation
	7:30 - 11:30	4.00	COMP	44	C	P		<p>SICP 1800 # PSI, OPEN CSG TO PIT, RIH.</p> <p>C/O 20' SAND TAG 4TH PLUG @ 8305' DRL PLG IN 8 MIN 900# PSI INCREASE RIH</p> <p>C/O 30' SAND TAG 5TH PLUG @ 8459' DRL PLG IN 4 MIN 400# PSI INCREASE RIH</p> <p>C/O 15' SAND TAG 6TH PLUG @ 8792' DRL PLG IN 4 MIN 1000# PSI INCREASE RIH</p> <p>C/O 30' SAND TAG 7TH PLUG @ 9205' DRL PLG IN 5 MIN 700# PSI INCREASE. RIH</p> <p>C/O TO @ 9627' CIRC CLEAN, RACK OUT SWIVEL. L/D 23 JTS, LAND TBG ON 281 JTS 23/8 L-80. RD FLOOR, ND BOPS NU WH. PUMP OFF BIT, LET WELL SET FOR 30 MIN FOR BIT TO FALL. TURN WELL OVER TO FB CREW. RIG DWN SICP = 1800      FTP = 100</p> <p>KB = 25' HANGER 41/16 = .83' 322 JTS 23/8 L-80 = 8895.23'      ( SURFAC VALVE LOCKED OPEN W/ POPOFF ASSEMBLY ) 1.875 X/N &amp; POBS = 2.20' EOT @ 8923.26'</p> <p>TWTR = 6354 BBLs TWR = 1200 BBLs TWLTR = 5154 BBLs</p> <p>344 JTS HAULED OUT 281 LANDED 63 TO RETURN WELL TURNED TO SALES @ 1200 HR ON 5/4/11 - 516 MCFD, 2040 BWPF, CP 1800#, FTP 1400#, CK 20/64"</p>
	12:00 - 12:00	0.00	PROD	50				

WELL DETAILS: NBU 921-25O4BS

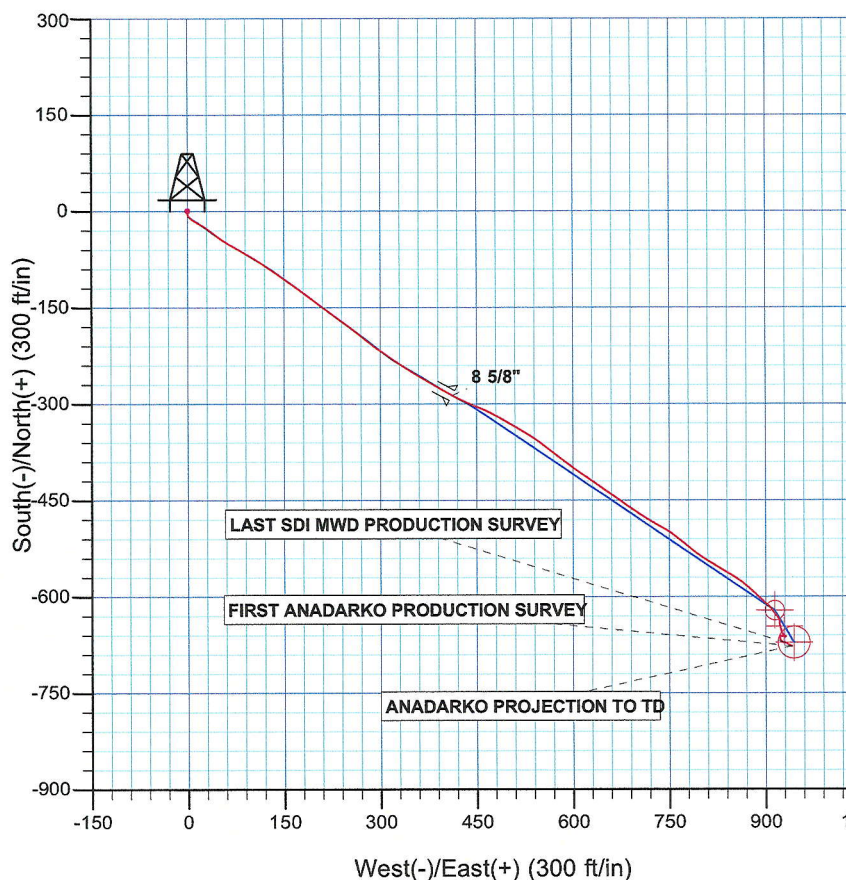
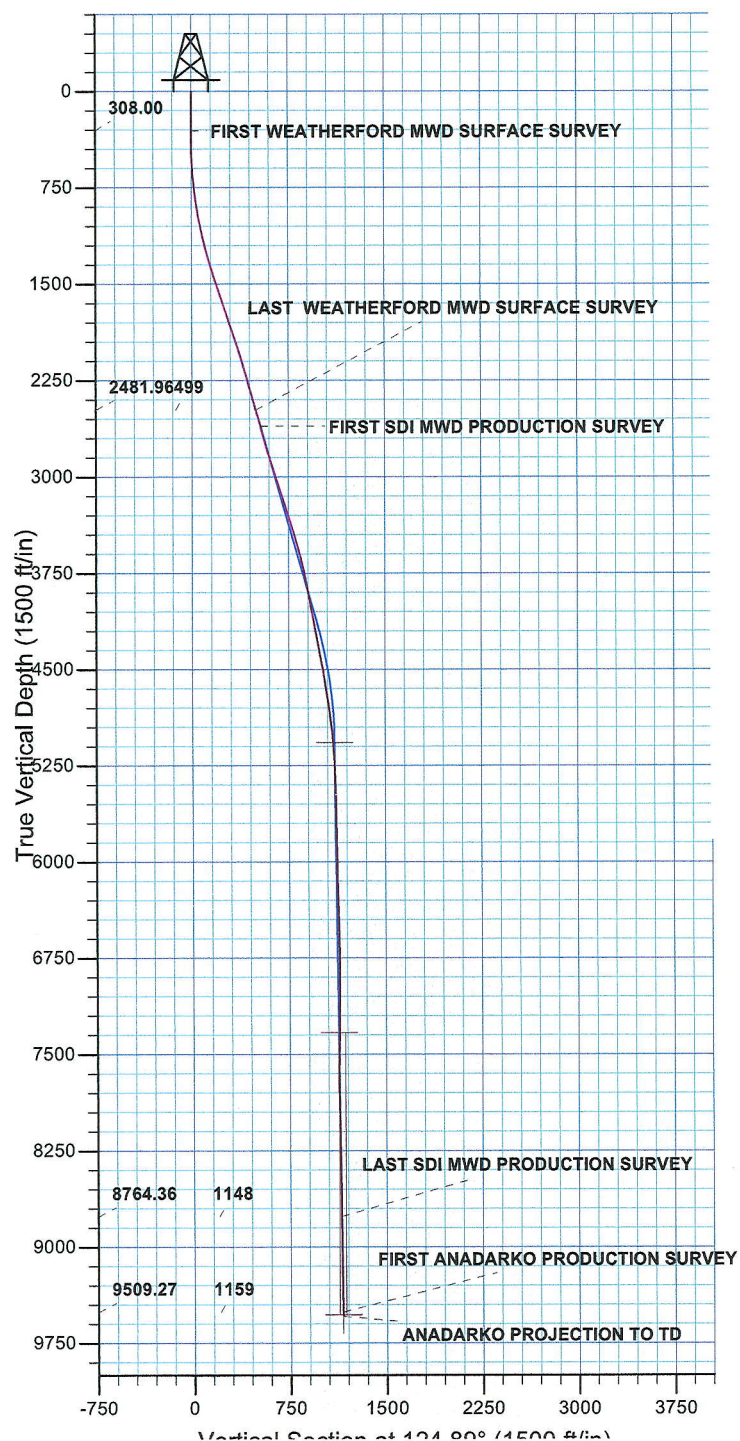
GL 4955' & RKB 25' @ 4980.00ft

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
0.00	0.00	14530654.85	2060621.93	40° 0' 10.609 N	109° 29' 58.362 W



Azimuths to True North  
Magnetic North: 11.13°

Magnetic Field  
Strength: 52374.6snT  
Dip Angle: 65.88°  
Date: 01/05/2011  
Model: IGRF2010



PROJECT DETAILS: Uintah County, UT UTM12

Geodetic System: Universal Transverse Mercator (US Survey Feet)  
Datum: NAD 1927 - Western US  
Ellipsoid: Clarke 1866  
Zone: Zone 12N (114 W to 108 W)  
Location: SEC 25 T9S R21E  
System Datum: Mean Sea Level

Design: OH (NBU 921-25O4BS/OH)

Created By: Robert Scott Date: 12/21 February 15 2014



**Scientific Drilling**  
Rocky Mountain Operations

# **Kerr McGee Oil and Gas Onshore LP**

Uintah County, UT UTM12  
NBU 921-25N Pad  
NBU 921-25O4BS

OH

Design: OH

## **Standard Survey Report**

15 February, 2011

**Company:** Kerr McGee Oil and Gas Onshore LP  
**Project:** Uintah County, UT UTM12  
**Site:** NBU 921-25N Pad  
**Well:** NBU 921-25O4BS  
**Wellbore:** OH  
**Design:** OH

**Local Co-ordinate Reference:** Well NBU 921-25O4BS  
**TVD Reference:** GL 4955' & RKB 25' @ 4980.00ft  
**MD Reference:** GL 4955' & RKB 25' @ 4980.00ft  
**North Reference:** True  
**Survey Calculation Method:** Minimum Curvature  
**Database:** EDM5000-RobertS-Local

<b>Project</b>	Uintah County, UT UTM12		
<b>Map System:</b>	Universal Transverse Mercator (US Survey Feet)	<b>System Datum:</b>	Mean Sea Level
<b>Geo Datum:</b>	NAD 1927 - Western US		
<b>Map Zone:</b>	Zone 12N (114 W to 108 W)		

Site		NBU 921-25N Pad, SEC 25 T9S R21E			
Site Position:		Northing:	14,530,655.41 usft	Latitude:	40° 0' 10.616 N
From:	Lat/Long	Easting:	2,060,612.11 usft	Longitude:	109° 29' 58.488 W
Position Uncertainty:	0.00 ft	Slot Radius:	13.200 in	Grid Convergence:	0.96 °

Well	NBU 921-25O4BS, 1156' FSL 2595' FWL					
Well Position	+N/-S	0.00 ft	Northing:	14,530,654.85 usft	Latitude:	40° 0' 10.609 N
	+E/-W	0.00 ft	Easting:	2,060,621.92 usft	Longitude:	109° 29' 58.362 W
Position Uncertainty		0.00 ft	Wellhead Elevation:	ft	Ground Level:	4,955.00 ft

<b>Wellbore</b>	OH					
<b>Magnetics</b>	<b>Model Name</b>	<b>Sample Date</b>	<b>Declination (°)</b>	<b>Dip Angle (°)</b>	<b>Field Strength (nT)</b>	
	IGRF2010	01/05/2011	11.13	65.88	52,375	

<b>Design</b>	OH					
<b>Audit Notes:</b>						
<b>Version:</b>	1.0	<b>Phase:</b>	ACTUAL	<b>Tie On Depth:</b>	0.00	
<b>Vertical Section:</b>	<b>Depth From (TVD) (ft)</b>	<b>+N/-S (ft)</b>	<b>+E/-W (ft)</b>	<b>Direction (°)</b>		
	0.00	0.00	0.00	124.89		

<b>Survey Program</b>	<b>Date</b> 02/15/2011				
<b>From (ft)</b>	<b>To (ft)</b>	<b>Survey (Wellbore)</b>	<b>Tool Name</b>	<b>Description</b>	
16.00	2,551.00	Survey #1 WEATHERFORD MWD SURFA	MWD	MWD - Standard	
2,680.00	8,909.00	Survey #2 SDI MWD PRODUCTION (OH)	MWD SDI	MWD - Standard ver 1.0.1	
9,654.00	9,685.00	Survey #3 ANADARKO PRODUCTION SU	MWD	MWD - Standard	

<b>Survey</b>									
<b>Measured Depth (ft)</b>	<b>Inclination (°)</b>	<b>Azimuth (°)</b>	<b>Vertical Depth (ft)</b>	<b>+N/-S (ft)</b>	<b>+E/-W (ft)</b>	<b>Vertical Section (ft)</b>	<b>Dogleg Rate (°/100ft)</b>	<b>Build Rate (°/100ft)</b>	<b>Turn Rate (°/100ft)</b>
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
16.00	0.00	0.00	16.00	0.00	0.00	0.00	0.00	0.00	0.00
308.00	0.50	76.29	308.00	0.30	1.24	0.84	0.17	0.17	0.00
<b>FIRST WEATHERFORD MWD SURFACE SURVEY</b>									
401.00	1.65	211.48	400.99	-0.74	0.93	1.19	2.19	1.24	145.37
497.00	2.69	180.16	496.92	-4.18	0.20	2.56	1.61	1.08	-32.63
592.00	3.88	138.91	591.77	-8.83	2.31	6.95	2.70	1.25	-43.42
688.00	5.06	124.91	687.48	-13.70	7.92	14.33	1.67	1.23	-14.58
782.00	6.75	120.04	780.98	-18.84	16.10	23.98	1.87	1.80	-5.18

**Company:** Kerr McGee Oil and Gas Onshore LP  
**Project:** Uintah County, UT UTM12  
**Site:** NBU 921-25N Pad  
**Well:** NBU 921-25O4BS  
**Wellbore:** OH  
**Design:** OH

**Local Co-ordinate Reference:** Well NBU 921-25O4BS  
**TVD Reference:** GL 4955' & RKB 25' @ 4980.00ft  
**MD Reference:** GL 4955' & RKB 25' @ 4980.00ft  
**North Reference:** True  
**Survey Calculation Method:** Minimum Curvature  
**Database:** EDM5000-RobertS-Local

**Survey**

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
878.00	8.38	123.29	876.14	-25.50	26.83	36.60	1.75	1.70	3.39
973.00	10.56	128.66	969.84	-34.74	39.42	52.21	2.47	2.29	5.65
1,067.00	11.94	122.91	1,062.04	-45.41	54.31	70.52	1.89	1.47	-6.12
1,162.00	13.56	119.79	1,154.69	-56.28	72.23	91.44	1.85	1.71	-3.28
1,257.00	15.00	120.29	1,246.76	-68.01	92.51	114.78	1.52	1.52	0.53
1,353.00	16.55	122.12	1,339.14	-81.55	114.82	140.83	1.70	1.61	1.91
1,448.00	16.38	125.29	1,430.24	-96.48	137.21	167.74	0.96	-0.18	3.34
1,542.00	17.94	125.41	1,520.06	-112.53	159.83	195.47	1.66	1.66	0.13
1,636.00	18.94	127.04	1,609.23	-130.11	183.81	225.19	1.20	1.06	1.73
1,731.00	18.50	126.79	1,699.20	-148.42	208.18	255.66	0.47	-0.46	-0.26
1,826.00	18.44	126.04	1,789.31	-166.29	232.40	285.75	0.26	-0.06	-0.79
1,921.00	19.19	126.66	1,879.23	-184.45	257.08	316.37	0.82	0.79	0.65
2,017.00	19.69	128.79	1,969.76	-204.00	282.34	348.28	0.90	0.52	2.22
2,112.00	16.94	125.91	2,059.94	-222.15	306.03	378.09	3.05	-2.89	-3.03
2,207.00	15.69	122.16	2,151.12	-237.11	328.11	404.76	1.72	-1.32	-3.95
2,301.00	15.06	120.79	2,241.75	-250.12	349.37	429.64	0.77	-0.67	-1.46
2,396.00	16.38	121.29	2,333.20	-263.40	371.42	455.32	1.40	1.39	0.53
2,491.00	16.44	120.04	2,424.33	-277.08	394.50	482.08	0.38	0.06	-1.32
2,551.00	15.89	118.76	2,481.96	-285.29	409.05	498.71	1.09	-0.92	-2.13
<b>LAST WEATHERFORD MWD SURFACE SURVEY</b>									
2,680.00	14.60	111.76	2,606.43	-299.81	439.64	532.11	1.74	-1.00	-5.43
<b>FIRST SDI MWD PRODUCTION SURVEY</b>									
2,774.00	16.18	114.66	2,697.05	-309.67	462.54	556.53	1.87	1.68	3.09
2,868.00	17.06	119.58	2,787.13	-321.94	486.44	583.15	1.76	0.94	5.23
2,963.00	17.67	120.81	2,877.80	-336.21	510.94	611.41	0.75	0.64	1.29
3,057.00	17.64	122.27	2,967.37	-351.12	535.24	639.87	0.47	-0.03	1.55
3,152.00	18.11	127.68	3,057.79	-367.83	559.10	669.00	1.82	0.49	5.69
3,246.00	19.01	127.61	3,146.90	-386.10	582.79	698.88	0.96	0.96	-0.07
3,341.00	17.59	125.73	3,237.10	-403.93	606.70	728.69	1.62	-1.49	-1.98
3,435.00	17.32	124.33	3,326.77	-420.11	629.78	756.89	0.53	-0.29	-1.49
3,529.00	16.27	124.50	3,416.76	-435.46	652.19	784.05	1.12	-1.12	0.18
3,624.00	16.18	126.08	3,507.97	-450.80	673.85	810.59	0.47	-0.09	1.66
3,718.00	14.86	124.24	3,598.55	-465.29	694.40	835.73	1.50	-1.40	-1.96
3,813.00	13.19	121.87	3,690.71	-477.87	713.68	858.74	1.86	-1.76	-2.49
3,907.00	11.52	119.49	3,782.53	-488.15	730.96	878.80	1.86	-1.78	-2.53
4,002.00	10.73	120.90	3,875.75	-497.37	746.81	897.06	0.88	-0.83	1.48
4,096.00	11.08	127.84	3,968.05	-507.40	761.45	914.81	1.44	0.37	7.38
4,190.00	11.08	129.07	4,060.30	-518.63	775.59	932.84	0.25	0.00	1.31
4,285.00	10.64	128.28	4,153.60	-529.82	789.57	950.70	0.49	-0.46	-0.83
4,379.00	10.38	124.33	4,246.02	-539.97	803.37	967.83	0.81	-0.28	-4.20
4,474.00	10.60	120.44	4,339.44	-549.23	817.97	985.10	0.78	0.23	-4.09
4,568.00	11.28	121.80	4,431.73	-558.45	833.24	1,002.90	0.77	0.72	1.45
4,663.00	10.02	120.72	4,525.09	-567.57	848.24	1,020.42	1.34	-1.33	-1.14
4,757.00	9.58	125.64	4,617.72	-576.31	861.63	1,036.40	1.01	-0.47	5.23

**Company:** Kerr McGee Oil and Gas Onshore LP  
**Project:** Uintah County, UT UTM12  
**Site:** NBU 921-25N Pad  
**Well:** NBU 921-25O4BS  
**Wellbore:** OH  
**Design:** OH

**Local Co-ordinate Reference:** Well NBU 921-25O4BS  
**TVD Reference:** GL 4955' & RKB 25' @ 4980.00ft  
**MD Reference:** GL 4955' & RKB 25' @ 4980.00ft  
**North Reference:** True  
**Survey Calculation Method:** Minimum Curvature  
**Database:** EDM5000-RobertS-Local

**Survey**

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
4,851.00	8.44	132.32	4,710.56	-585.51	873.09	1,051.06	1.64	-1.21	7.11
4,946.00	7.83	132.94	4,804.60	-594.61	882.98	1,064.38	0.65	-0.64	0.65
5,040.00	7.47	132.68	4,897.77	-603.11	892.16	1,076.78	0.38	-0.38	-0.28
5,134.00	6.86	132.76	4,991.03	-611.07	900.77	1,088.39	0.65	-0.65	0.09
5,229.00	4.83	137.69	5,085.53	-617.88	907.63	1,097.91	2.20	-2.14	5.19
5,323.00	3.17	144.98	5,179.30	-622.93	911.79	1,104.22	1.84	-1.77	7.76
5,418.00	3.34	142.87	5,274.15	-627.29	914.97	1,109.31	0.22	0.18	-2.22
5,512.00	1.05	135.64	5,368.07	-630.09	917.22	1,112.77	2.45	-2.44	-7.69
5,606.00	1.23	148.85	5,462.06	-631.57	918.35	1,114.53	0.34	0.19	14.05
5,701.00	1.23	146.30	5,557.03	-633.29	919.44	1,116.41	0.06	0.00	-2.68
5,795.00	1.32	147.88	5,651.01	-635.05	920.57	1,118.35	0.10	0.10	1.68
5,889.00	1.49	171.61	5,744.98	-637.17	921.33	1,120.19	0.64	0.18	25.24
5,984.00	1.16	180.84	5,839.96	-639.36	921.49	1,121.57	0.41	-0.35	9.72
6,078.00	1.32	176.80	5,933.94	-641.39	921.54	1,122.77	0.19	0.17	-4.30
6,173.00	1.32	170.29	6,028.91	-643.56	921.79	1,124.21	0.16	0.00	-6.85
6,267.00	1.85	169.01	6,122.87	-646.12	922.26	1,126.06	0.57	0.56	-1.36
6,362.00	1.93	160.54	6,217.82	-649.13	923.08	1,128.47	0.31	0.08	-8.92
6,456.00	2.11	166.60	6,311.76	-652.31	924.01	1,131.04	0.30	0.19	6.45
6,550.00	1.85	163.09	6,405.71	-655.44	924.85	1,133.53	0.31	-0.28	-3.73
6,645.00	2.20	160.62	6,500.65	-658.63	925.91	1,136.21	0.38	0.37	-2.60
6,739.00	1.06	95.06	6,594.62	-660.41	927.37	1,138.43	2.14	-1.21	-69.74
6,833.00	1.06	113.78	6,688.60	-660.84	929.03	1,140.04	0.37	0.00	19.91
6,927.00	0.79	136.81	6,782.59	-661.66	930.27	1,141.53	0.48	-0.29	24.50
7,022.00	0.97	125.21	6,877.58	-662.60	931.38	1,142.97	0.27	0.19	-12.21
7,116.00	1.06	282.97	6,971.57	-662.86	931.18	1,142.96	2.12	0.10	167.83
7,211.00	1.41	279.89	7,066.55	-662.46	929.17	1,141.09	0.37	0.37	-3.24
7,305.00	1.06	287.89	7,160.53	-662.00	927.20	1,139.21	0.41	-0.37	8.51
7,399.00	1.06	225.15	7,254.51	-662.35	925.76	1,138.22	1.17	0.00	-66.74
7,494.00	0.62	330.00	7,349.51	-662.52	924.88	1,137.60	1.43	-0.46	110.37
7,588.00	0.62	303.97	7,443.50	-661.80	924.20	1,136.63	0.30	0.00	-27.69
7,682.00	0.50	257.72	7,537.50	-661.60	923.38	1,135.84	0.48	-0.13	-49.20
7,776.00	0.44	222.41	7,631.50	-661.95	922.74	1,135.52	0.31	-0.06	-37.56
7,871.00	0.70	213.54	7,726.49	-662.71	922.17	1,135.48	0.29	0.27	-9.34
7,965.00	0.70	180.40	7,820.48	-663.76	921.85	1,135.82	0.42	0.00	-35.26
8,059.00	0.70	171.52	7,914.48	-664.90	921.93	1,136.54	0.12	0.00	-9.45
8,154.00	1.41	167.92	8,009.46	-666.62	922.26	1,137.79	0.75	0.75	-3.79
8,248.00	1.38	133.59	8,103.43	-668.53	923.32	1,139.76	0.88	-0.03	-36.52
8,343.00	1.76	133.29	8,198.40	-670.32	925.21	1,142.33	0.40	0.40	-0.32
8,437.00	0.53	105.25	8,292.38	-671.42	926.68	1,144.17	1.40	-1.31	-29.83
8,531.00	0.70	80.82	8,386.37	-671.44	927.67	1,144.99	0.33	0.18	-25.99
8,625.00	0.44	98.13	8,480.37	-671.40	928.59	1,145.73	0.33	-0.28	18.41
8,720.00	0.30	92.14	8,575.37	-671.46	929.20	1,146.26	0.15	-0.15	-6.31
8,814.00	0.35	146.83	8,669.37	-671.71	929.61	1,146.73	0.32	0.05	58.18



**Company:** Kerr McGee Oil and Gas Onshore LP  
**Project:** Uintah County, UT UTM12  
**Site:** NBU 921-25N Pad  
**Well:** NBU 921-25O4BS  
**Wellbore:** OH  
**Design:** OH

**Local Co-ordinate Reference:** Well NBU 921-25O4BS  
**TVD Reference:** GL 4955' & RKB 25' @ 4980.00ft  
**MD Reference:** GL 4955' & RKB 25' @ 4980.00ft  
**North Reference:** True  
**Survey Calculation Method:** Minimum Curvature  
**Database:** EDM5000-RobertS-Local

**Survey**

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
8,909.00	0.88	116.77	8,764.36	-672.29	930.42	1,147.73	0.63	0.56	-31.64
<b>LAST SDI MWD PRODUCTION SURVEY</b>									
9,654.00	0.88	116.77	9,509.27	-677.44	940.63	1,159.05	0.00	0.00	0.00
<b>FIRST ANADARKO PRODUCTION SURVEY</b>									
9,685.00	0.88	116.77	9,540.27	-677.65	941.06	1,159.52	0.00	0.00	0.00
<b>ANADARKO PROJECTION TO TD</b>									

**Design Annotations**

Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment
		+N/-S (ft)	+E/-W (ft)	
308.00	308.00	0.30	1.24	FIRST WEATHERFORD MWD SURFACE SURVEY
2,551.00	2,481.96	-285.29	409.05	LAST WEATHERFORD MWD SURFACE SURVEY
2,680.00	2,606.43	-299.81	439.64	FIRST SDI MWD PRODUCTION SURVEY
8,909.00	8,764.36	-672.29	930.42	LAST SDI MWD PRODUCTION SURVEY
9,654.00	9,509.27	-677.44	940.63	FIRST ANADARKO PRODUCTION SURVEY
9,685.00	9,540.27	-677.65	941.06	ANADARKO PROJECTION TO TD

Checked By: \_\_\_\_\_ Approved By: \_\_\_\_\_ Date: \_\_\_\_\_



# **Kerr McGee Oil and Gas Onshore LP**

**Uintah County, UT UTM12  
NBU 921-25N Pad  
NBU 921-25O4BS**

**OH**

**Design: OH**

## **Survey Report - Geographic**

**15 February, 2011**



**Company:** Kerr McGee Oil and Gas Onshore LP  
**Project:** Uintah County, UT UTM12  
**Site:** NBU 921-25N Pad  
**Well:** NBU 921-25O4BS  
**Wellbore:** OH  
**Design:** OH

**Local Co-ordinate Reference:** Well NBU 921-25O4BS  
**TVD Reference:** GL 4955' & RKB 25' @ 4980.00ft  
**MD Reference:** GL 4955' & RKB 25' @ 4980.00ft  
**North Reference:** True  
**Survey Calculation Method:** Minimum Curvature  
**Database:** EDM5000-RobertS-Local

**Project** Uintah County, UT UTM12

**Map System:** Universal Transverse Mercator (US Survey Feet)

**System Datum:**

Mean Sea Level

**Geo Datum:** NAD 1927 - Western US

**Map Zone:** Zone 12N (114 W to 108 W)

**Site** NBU 921-25N Pad, SEC 25 T9S R21E

<b>Site Position:</b>		<b>Northing:</b>	14,530,655.41 usft	<b>Latitude:</b>	40° 0' 10.616 N
<b>From:</b>	Lat/Long	<b>Easting:</b>	2,060,612.11 usft	<b>Longitude:</b>	109° 29' 58.488 W
<b>Position Uncertainty:</b>	0.00 ft	<b>Slot Radius:</b>	13.200 in	<b>Grid Convergence:</b>	0.96 °

**Well** NBU 921-25O4BS, 1156' FSL 2595' FWL

<b>Well Position</b>	<b>+N/-S</b>	0.00 ft	<b>Northing:</b>	14,530,654.85 usft	<b>Latitude:</b>	40° 0' 10.609 N
	<b>+E/-W</b>	0.00 ft	<b>Easting:</b>	2,060,621.92 usft	<b>Longitude:</b>	109° 29' 58.362 W
<b>Position Uncertainty</b>		0.00 ft	<b>Wellhead Elevation:</b>	ft	<b>Ground Level:</b>	4,955.00 ft

**Wellbore** OH

<b>Magnetics</b>	<b>Model Name</b>	<b>Sample Date</b>	<b>Declination (°)</b>	<b>Dip Angle (°)</b>	<b>Field Strength (nT)</b>
	IGRF2010	01/05/2011	11.13	65.88	52,375

**Design** OH

**Audit Notes:**

**Version:** 1.0      **Phase:** ACTUAL      **Tie On Depth:** 0.00

<b>Vertical Section:</b>	<b>Depth From (TVD) (ft)</b>	<b>+N/-S (ft)</b>	<b>+E/-W (ft)</b>	<b>Direction (°)</b>
	0.00	0.00	0.00	124.89

**Survey Program** Date 02/15/2011

<b>From (ft)</b>	<b>To (ft)</b>	<b>Survey (Wellbore)</b>	<b>Tool Name</b>	<b>Description</b>
16.00	2,551.00	Survey #1 WEATHERFORD MWD SURFA	MWD	MWD - Standard
2,680.00	8,909.00	Survey #2 SDI MWD PRODUCTION (OH)	MWD SDI	MWD - Standard ver 1.0.1
9,654.00	9,685.00	Survey #3 ANADARKO PRODUCTION SU	MWD	MWD - Standard

**Survey**

<b>Measured Depth (ft)</b>	<b>Inclination (°)</b>	<b>Azimuth (°)</b>	<b>Vertical Depth (ft)</b>	<b>+N/-S (ft)</b>	<b>+E/-W (ft)</b>	<b>Map Northing (usft)</b>	<b>Map Easting (usft)</b>	<b>Latitude</b>	<b>Longitude</b>
0.00	0.00	0.00	0.00	0.00	0.00	14,530,654.85	2,060,621.92	40° 0' 10.609 N	109° 29' 58.362 W
16.00	0.00	0.00	16.00	0.00	0.00	14,530,654.85	2,060,621.92	40° 0' 10.609 N	109° 29' 58.362 W
308.00	0.50	76.29	308.00	0.30	1.24	14,530,655.17	2,060,623.16	40° 0' 10.612 N	109° 29' 58.346 W
<b>FIRST WEATHERFORD MWD SURFACE SURVEY</b>									
401.00	1.65	211.48	400.99	-0.74	0.93	14,530,654.12	2,060,622.87	40° 0' 10.602 N	109° 29' 58.350 W
497.00	2.69	180.16	496.92	-4.18	0.20	14,530,650.68	2,060,622.20	40° 0' 10.568 N	109° 29' 58.359 W
592.00	3.88	138.91	591.77	-8.83	2.31	14,530,646.06	2,060,624.38	40° 0' 10.522 N	109° 29' 58.332 W
688.00	5.06	124.91	687.48	-13.70	7.92	14,530,641.29	2,060,630.07	40° 0' 10.474 N	109° 29' 58.260 W
782.00	6.75	120.04	780.98	-18.84	16.10	14,530,636.29	2,060,638.34	40° 0' 10.423 N	109° 29' 58.155 W
878.00	8.38	123.29	876.14	-25.50	26.83	14,530,629.80	2,060,649.18	40° 0' 10.357 N	109° 29' 58.017 W

**Company:** Kerr McGee Oil and Gas Onshore LP  
**Project:** Uintah County, UT UTM12  
**Site:** NBU 921-25N Pad  
**Well:** NBU 921-25O4BS  
**Wellbore:** OH  
**Design:** OH

**Local Co-ordinate Reference:** Well NBU 921-25O4BS  
**TVD Reference:** GL 4955' & RKB 25' @ 4980.00ft  
**MD Reference:** GL 4955' & RKB 25' @ 4980.00ft  
**North Reference:** True  
**Survey Calculation Method:** Minimum Curvature  
**Database:** EDM5000-RobertS-Local

**Survey**

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
973.00	10.56	128.66	969.84	-34.74	39.42	14,530,620.78	2,060,661.92	40° 0' 10.266 N	109° 29' 57.855 W
1,067.00	11.94	122.91	1,062.04	-45.41	54.31	14,530,610.37	2,060,676.99	40° 0' 10.160 N	109° 29' 57.664 W
1,162.00	13.56	119.79	1,154.69	-56.28	72.23	14,530,599.80	2,060,695.09	40° 0' 10.053 N	109° 29' 57.434 W
1,257.00	15.00	120.29	1,246.76	-68.01	92.51	14,530,588.40	2,060,715.56	40° 0' 9.937 N	109° 29' 57.173 W
1,353.00	16.55	122.12	1,339.14	-81.55	114.82	14,530,575.25	2,060,738.10	40° 0' 9.803 N	109° 29' 56.886 W
1,448.00	16.38	125.29	1,430.24	-96.48	137.21	14,530,560.69	2,060,760.74	40° 0' 9.656 N	109° 29' 56.599 W
1,542.00	17.94	125.41	1,520.06	-112.53	159.83	14,530,545.03	2,060,783.63	40° 0' 9.497 N	109° 29' 56.308 W
1,636.00	18.94	127.04	1,609.23	-130.11	183.81	14,530,527.86	2,060,807.89	40° 0' 9.323 N	109° 29' 56.000 W
1,731.00	18.50	126.79	1,699.20	-148.42	208.18	14,530,509.96	2,060,832.58	40° 0' 9.142 N	109° 29' 55.686 W
1,826.00	18.44	126.04	1,789.31	-166.29	232.40	14,530,492.50	2,060,857.09	40° 0' 8.966 N	109° 29' 55.375 W
1,921.00	19.19	126.66	1,879.23	-184.45	257.08	14,530,474.76	2,060,882.07	40° 0' 8.786 N	109° 29' 55.058 W
2,017.00	19.69	128.79	1,969.76	-204.00	282.34	14,530,455.63	2,060,907.66	40° 0' 8.593 N	109° 29' 54.733 W
2,112.00	16.94	125.91	2,059.94	-222.15	306.03	14,530,437.89	2,060,931.65	40° 0' 8.413 N	109° 29' 54.429 W
2,207.00	15.69	122.16	2,151.12	-237.11	328.11	14,530,423.30	2,060,953.98	40° 0' 8.266 N	109° 29' 54.145 W
2,301.00	15.06	120.79	2,241.75	-250.12	349.37	14,530,410.65	2,060,975.45	40° 0' 8.137 N	109° 29' 53.872 W
2,396.00	16.38	121.29	2,333.20	-263.40	371.42	14,530,397.74	2,060,997.72	40° 0' 8.006 N	109° 29' 53.588 W
2,491.00	16.44	120.04	2,424.33	-277.08	394.50	14,530,384.45	2,061,021.03	40° 0' 7.870 N	109° 29' 53.292 W
2,551.00	15.89	118.76	2,481.96	-285.29	409.05	14,530,376.49	2,061,035.72	40° 0' 7.789 N	109° 29' 53.105 W
<b>LAST WEATHERFORD MWD SURFACE SURVEY</b>									
2,680.00	14.60	111.76	2,606.43	-299.81	439.64	14,530,362.48	2,061,066.54	40° 0' 7.646 N	109° 29' 52.712 W
<b>FIRST SDI MWD PRODUCTION SURVEY</b>									
2,774.00	16.18	114.66	2,697.05	-309.67	462.54	14,530,353.01	2,061,089.61	40° 0' 7.548 N	109° 29' 52.417 W
2,868.00	17.06	119.58	2,787.13	-321.94	486.44	14,530,341.15	2,061,113.71	40° 0' 7.427 N	109° 29' 52.110 W
2,963.00	17.67	120.81	2,877.80	-336.21	510.94	14,530,327.30	2,061,138.45	40° 0' 7.286 N	109° 29' 51.795 W
3,057.00	17.64	122.27	2,967.37	-351.12	535.24	14,530,312.80	2,061,163.00	40° 0' 7.139 N	109° 29' 51.483 W
3,152.00	18.11	127.68	3,057.79	-367.83	559.10	14,530,296.49	2,061,187.13	40° 0' 6.973 N	109° 29' 51.176 W
3,246.00	19.01	127.61	3,146.90	-386.10	582.79	14,530,278.62	2,061,211.13	40° 0' 6.793 N	109° 29' 50.872 W
3,341.00	17.59	125.73	3,237.10	-403.93	606.70	14,530,261.20	2,061,235.34	40° 0' 6.617 N	109° 29' 50.565 W
3,435.00	17.32	124.33	3,326.77	-420.11	629.78	14,530,245.40	2,061,258.69	40° 0' 6.457 N	109° 29' 50.268 W
3,529.00	16.27	124.50	3,416.76	-435.46	652.19	14,530,230.43	2,061,281.35	40° 0' 6.305 N	109° 29' 49.980 W
3,624.00	16.18	126.08	3,507.97	-450.80	673.85	14,530,215.46	2,061,303.27	40° 0' 6.153 N	109° 29' 49.702 W
3,718.00	14.86	124.24	3,598.55	-465.29	694.40	14,530,201.32	2,061,324.06	40° 0' 6.010 N	109° 29' 49.437 W
3,813.00	13.19	121.87	3,690.71	-477.87	713.68	14,530,189.07	2,061,343.55	40° 0' 5.886 N	109° 29' 49.190 W
3,907.00	11.52	119.49	3,782.53	-488.15	730.96	14,530,179.07	2,061,361.00	40° 0' 5.784 N	109° 29' 48.968 W
4,002.00	10.73	120.90	3,875.75	-497.37	746.81	14,530,170.13	2,061,377.00	40° 0' 5.693 N	109° 29' 48.764 W
4,096.00	11.08	127.84	3,968.05	-507.40	761.45	14,530,160.34	2,061,391.81	40° 0' 5.594 N	109° 29' 48.576 W
4,190.00	11.08	129.07	4,060.30	-518.63	775.59	14,530,149.35	2,061,406.14	40° 0' 5.483 N	109° 29' 48.394 W
4,285.00	10.64	128.28	4,153.60	-529.82	789.57	14,530,138.40	2,061,420.30	40° 0' 5.372 N	109° 29' 48.214 W
4,379.00	10.38	124.33	4,246.02	-539.97	803.37	14,530,128.48	2,061,434.27	40° 0' 5.272 N	109° 29' 48.037 W
4,474.00	10.60	120.44	4,339.44	-549.23	817.97	14,530,119.47	2,061,449.03	40° 0' 5.180 N	109° 29' 47.849 W
4,568.00	11.28	121.80	4,431.73	-558.45	833.24	14,530,110.51	2,061,464.45	40° 0' 5.089 N	109° 29' 47.653 W
4,663.00	10.02	120.72	4,525.09	-567.57	848.24	14,530,101.64	2,061,479.60	40° 0' 4.999 N	109° 29' 47.460 W
4,757.00	9.58	125.64	4,617.72	-576.31	861.63	14,530,093.14	2,061,493.13	40° 0' 4.913 N	109° 29' 47.288 W
4,851.00	8.44	132.32	4,710.56	-585.51	873.09	14,530,084.13	2,061,504.75	40° 0' 4.822 N	109° 29' 47.141 W
4,946.00	7.83	132.94	4,804.60	-594.61	882.98	14,530,075.19	2,061,514.79	40° 0' 4.732 N	109° 29' 47.014 W
5,040.00	7.47	132.68	4,897.77	-603.11	892.16	14,530,066.84	2,061,524.11	40° 0' 4.648 N	109° 29' 46.896 W
5,134.00	6.86	132.76	4,991.03	-611.07	900.77	14,530,059.04	2,061,532.86	40° 0' 4.569 N	109° 29' 46.785 W
5,229.00	4.83	137.69	5,085.53	-617.88	907.63	14,530,052.34	2,061,539.83	40° 0' 4.502 N	109° 29' 46.697 W
5,323.00	3.17	144.98	5,179.30	-622.93	911.79	14,530,047.36	2,061,544.07	40° 0' 4.452 N	109° 29' 46.644 W
5,418.00	3.34	142.87	5,274.15	-627.29	914.97	14,530,043.05	2,061,547.32	40° 0' 4.409 N	109° 29' 46.603 W
5,512.00	1.05	135.64	5,368.07	-630.09	917.22	14,530,040.29	2,061,549.62	40° 0' 4.381 N	109° 29' 46.574 W
5,606.00	1.23	148.85	5,462.06	-631.57	918.35	14,530,038.83	2,061,550.77	40° 0' 4.366 N	109° 29' 46.559 W
5,701.00	1.23	146.30	5,557.03	-633.29	919.44	14,530,037.13	2,061,551.89	40° 0' 4.349 N	109° 29' 46.545 W
5,795.00	1.32	147.88	5,651.01	-635.05	920.57	14,530,035.39	2,061,553.06	40° 0' 4.332 N	109° 29' 46.531 W
5,889.00	1.49	171.61	5,744.98	-637.17	921.33	14,530,033.28	2,061,553.85	40° 0' 4.311 N	109° 29' 46.521 W

**Company:** Kerr McGee Oil and Gas Onshore LP  
**Project:** Uintah County, UT UTM12  
**Site:** NBU 921-25N Pad  
**Well:** NBU 921-25O4BS  
**Wellbore:** OH  
**Design:** OH

**Local Co-ordinate Reference:** Well NBU 921-25O4BS  
**TVD Reference:** GL 4955' & RKB 25' @ 4980.00ft  
**MD Reference:** GL 4955' & RKB 25' @ 4980.00ft  
**North Reference:** True  
**Survey Calculation Method:** Minimum Curvature  
**Database:** EDM5000-RobertS-Local

**Survey**

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
5,984.00	1.16	180.84	5,839.96	-639.36	921.49	14,530,031.10	2,061,554.05	40° 0' 4.289 N	109° 29' 46.519 W
6,078.00	1.32	176.80	5,933.94	-641.39	921.54	14,530,029.07	2,061,554.13	40° 0' 4.269 N	109° 29' 46.518 W
6,173.00	1.32	170.29	6,028.91	-643.56	921.79	14,530,026.90	2,061,554.41	40° 0' 4.248 N	109° 29' 46.515 W
6,267.00	1.85	169.01	6,122.87	-646.12	922.26	14,530,024.35	2,061,554.93	40° 0' 4.223 N	109° 29' 46.509 W
6,362.00	1.93	160.54	6,217.82	-649.13	923.08	14,530,021.35	2,061,555.80	40° 0' 4.193 N	109° 29' 46.498 W
6,456.00	2.11	166.60	6,311.76	-652.31	924.01	14,530,018.20	2,061,556.79	40° 0' 4.161 N	109° 29' 46.487 W
6,550.00	1.85	163.09	6,405.71	-655.44	924.85	14,530,015.07	2,061,557.68	40° 0' 4.130 N	109° 29' 46.476 W
6,645.00	2.20	160.62	6,500.65	-658.63	925.91	14,530,011.91	2,061,558.79	40° 0' 4.099 N	109° 29' 46.462 W
6,739.00	1.06	95.06	6,594.62	-660.41	927.37	14,530,010.15	2,061,560.28	40° 0' 4.081 N	109° 29' 46.443 W
6,833.00	1.06	113.78	6,688.60	-660.84	929.03	14,530,009.75	2,061,561.95	40° 0' 4.077 N	109° 29' 46.422 W
6,927.00	0.79	136.81	6,782.59	-661.66	930.27	14,530,008.95	2,061,563.20	40° 0' 4.069 N	109° 29' 46.406 W
7,022.00	0.97	125.21	6,877.58	-662.60	931.38	14,530,008.03	2,061,564.32	40° 0' 4.060 N	109° 29' 46.392 W
7,116.00	1.06	282.97	6,971.57	-662.86	931.18	14,530,007.76	2,061,564.13	40° 0' 4.057 N	109° 29' 46.394 W
7,211.00	1.41	279.89	7,066.55	-662.46	929.17	14,530,008.13	2,061,562.12	40° 0' 4.061 N	109° 29' 46.420 W
7,305.00	1.06	287.89	7,160.53	-662.00	927.20	14,530,008.56	2,061,560.14	40° 0' 4.066 N	109° 29' 46.446 W
7,399.00	1.06	225.15	7,254.51	-662.35	925.76	14,530,008.19	2,061,558.70	40° 0' 4.062 N	109° 29' 46.464 W
7,494.00	0.62	330.00	7,349.51	-662.52	924.88	14,530,008.00	2,061,557.83	40° 0' 4.060 N	109° 29' 46.475 W
7,588.00	0.62	303.97	7,443.50	-661.80	924.20	14,530,008.71	2,061,557.14	40° 0' 4.068 N	109° 29' 46.484 W
7,682.00	0.50	257.72	7,537.50	-661.60	923.38	14,530,008.89	2,061,556.31	40° 0' 4.070 N	109° 29' 46.495 W
7,776.00	0.44	222.41	7,631.50	-661.95	922.74	14,530,008.53	2,061,555.67	40° 0' 4.066 N	109° 29' 46.503 W
7,871.00	0.70	213.54	7,726.49	-662.71	922.17	14,530,007.77	2,061,555.12	40° 0' 4.059 N	109° 29' 46.510 W
7,965.00	0.70	180.40	7,820.48	-663.76	921.85	14,530,006.71	2,061,554.82	40° 0' 4.048 N	109° 29' 46.514 W
8,059.00	0.70	171.52	7,914.48	-664.90	921.93	14,530,005.57	2,061,554.92	40° 0' 4.037 N	109° 29' 46.513 W
8,154.00	1.41	167.92	8,009.46	-666.62	922.26	14,530,003.86	2,061,555.28	40° 0' 4.020 N	109° 29' 46.509 W
8,248.00	1.38	133.59	8,103.43	-668.53	923.32	14,530,001.96	2,061,556.37	40° 0' 4.001 N	109° 29' 46.495 W
8,343.00	1.76	133.29	8,198.40	-670.32	925.21	14,530,000.21	2,061,558.29	40° 0' 3.983 N	109° 29' 46.471 W
8,437.00	0.53	105.25	8,292.38	-671.42	926.68	14,529,999.13	2,061,559.78	40° 0' 3.972 N	109° 29' 46.452 W
8,531.00	0.70	80.82	8,386.37	-671.44	927.67	14,529,999.12	2,061,560.77	40° 0' 3.972 N	109° 29' 46.440 W
8,625.00	0.44	98.13	8,480.37	-671.40	928.59	14,529,999.18	2,061,561.69	40° 0' 3.973 N	109° 29' 46.428 W
8,720.00	0.30	92.14	8,575.37	-671.46	929.20	14,529,999.13	2,061,562.30	40° 0' 3.972 N	109° 29' 46.420 W
8,814.00	0.35	146.83	8,669.37	-671.71	929.61	14,529,998.88	2,061,562.71	40° 0' 3.970 N	109° 29' 46.415 W
8,909.00	0.88	116.77	8,764.36	-672.29	930.42	14,529,998.33	2,061,563.53	40° 0' 3.964 N	109° 29' 46.404 W
<b>LAST SDI MWD PRODUCTION SURVEY</b>									
9,654.00	0.88	116.77	9,509.27	-677.44	940.63	14,529,993.35	2,061,573.83	40° 0' 3.913 N	109° 29' 46.273 W
<b>FIRST ANADARKO PRODUCTION SURVEY</b>									
9,685.00	0.88	116.77	9,540.27	-677.65	941.06	14,529,993.14	2,061,574.26	40° 0' 3.911 N	109° 29' 46.267 W
<b>ANADARKO PROJECTION TO TD</b>									

**Design Annotations**

Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment
		+N/-S (ft)	+E/-W (ft)	
308.00	308.00	0.30	1.24	FIRST WEATHERFORD MWD SURFACE SURVEY
2,551.00	2,481.96	-285.29	409.05	LAST WEATHERFORD MWD SURFACE SURVEY
2,680.00	2,606.43	-299.81	439.64	FIRST SDI MWD PRODUCTION SURVEY
8,909.00	8,764.36	-672.29	930.42	LAST SDI MWD PRODUCTION SURVEY

Checked By: \_\_\_\_\_ Approved By: \_\_\_\_\_ Date: \_\_\_\_\_

STATE OF UTAH  
DEPARTMENT OF NATURAL RESOURCES  
DIVISION OF OIL, GAS AND MINING

AMENDED REPORT ☐ FORM 8  
(highlight changes)

5. LEASE DESIGNATION AND SERIAL NUMBER:  
UO 4139 ST

6. IF INDIAN, ALLOTTEE OR TRIBE NAME

7. UNIT or CA AGREEMENT NAME  
UTU63047A

8. WELL NAME and NUMBER:  
NBU 921-2504BS

9. API NUMBER:  
4304751264

10. FIELD AND POOL, OR WILDCAT  
NATURAL BUTTES

11. QTR/QTR, SECTION, TOWNSHIP, RANGE,  
MERIDIAN:  
SESW 25 9S 21E S

12. COUNTY  
UINTAH

13. STATE  
UTAH

WELL COMPLETION OR RECOMPLETION REPORT AND LOG

1a. TYPE OF WELL: OIL WELL ☐ GAS WELL ☒ DRY ☐ OTHER

b. TYPE OF WORK: NEW WELL ☒ HORIZ. LATS. ☐ DEEP-EN ☐ RE-ENTRY ☐ DIFF. RESVR. ☐ OTHER

2. NAME OF OPERATOR:  
KERR MCGEE OIL & GAS ONSHORE, L.P.

3. ADDRESS OF OPERATOR: P.O. BOX 173779 CITY DENVER STATE CO ZIP 80217  
PHONE NUMBER: (720) 929-6100

4. LOCATION OF WELL (FOOTAGES)  
AT SURFACE: SESW 1156 FSL 2595 FWL S25, T9S, R21E  
AT TOP PRODUCING INTERVAL REPORTED BELOW: SWSE 493 FSL 1760 FEL S25, T9S, R21E  
AT TOTAL DEPTH: SWSE 478 FSL 1744 FEL S25, T9S, R21E

14. DATE SPUDDED: 1/4/2011  
15. DATE T.D. REACHED: 2/12/2011  
16. DATE COMPLETED: 5/4/2011  
ABANDONED ☐ READY TO PRODUCE ☒

17. ELEVATIONS (DF, RKB, RT, GL):  
4955 GL

18. TOTAL DEPTH: MD 9,685  
TVD 9,540  
19. PLUG BACK T.D.: MD 9,629  
TVD 9,484  
20. IF MULTIPLE COMPLETIONS, HOW MANY? \*

21. DEPTH BRIDGE MD  
PLUG SET: TVD

22. TYPE ELECTRIC AND OTHER MECHANICAL LOGS RUN (Submit copy of each)

GR/RCBL-BHV-SD/DSN/ACTR

23.  
WAS WELL CORED? NO ☒ YES ☐ (Submit analysis)  
WAS DST RUN? NO ☒ YES ☐ (Submit report)  
DIRECTIONAL SURVEY? NO ☐ YES ☒ (Submit copy)

24. CASING AND LINER RECORD (Report all strings set in well)

HOLE SIZE	SIZE/GRADE	WEIGHT (#/ft.)	TOP (MD)	BOTTOM (MD)	STAGE CEMENTER DEPTH	CEMENT TYPE & NO. OF SACKS	SLURRY VOLUME (BBL)	CEMENT TOP **	AMOUNT PULLED
20"	14" STL	36.7#		40		28			
11"	8 5/8" IJ-55	28#		2,588		775		0	
7 7/8"	4 1/2" I-80	11.6#		9,672		1,680		1090	

25. TUBING RECORD

SIZE	DEPTH SET (MD)	PACKER SET (MD)	SIZE	DEPTH SET (MD)	PACKER SET (MD)	SIZE	DEPTH SET (MD)	PACKER SET (MD)
2 3/8"	8,923							

26. PRODUCING INTERVALS

FORMATION NAME	TOP (MD)	BOTTOM (MD)	TOP (TVD)	BOTTOM (TVD)	INTERVAL (Top/Bot - MD)	SIZE	NO. HOLES	PERFORATION STATUS
(A) MESAVERDE	7,486	9,540			7,486 9,540	0.36	163	Open <input checked="" type="checkbox"/> Squeezed <input type="checkbox"/>
(B) WSMVD								Open <input type="checkbox"/> Squeezed <input type="checkbox"/>
(C)								Open <input type="checkbox"/> Squeezed <input type="checkbox"/>
(D)								Open <input type="checkbox"/> Squeezed <input type="checkbox"/>

27. PERFORATION RECORD

28. ACID, FRACTURE, TREATMENT, CEMENT SQUEEZE, ETC.

DEPTH INTERVAL	AMOUNT AND TYPE OF MATERIAL
7486 - 9540	PUMP 6,114 BBLS SLICK H2O & 119,670 LBS SAND

29. ENCLOSED ATTACHMENTS:

☐ ELECTRICAL/MECHANICAL LOGS  
☐ SUNDRY NOTICE FOR PLUGGING AND CEMENT VERIFICATION  
☐ GEOLOGIC REPORT  
☐ CORE ANALYSIS  
☐ DST REPORT  
☐ OTHER:  
☒ DIRECTIONAL SURVEY

PROD



## 31. INITIAL PRODUCTION

## INTERVAL A (As shown in Item #26)

DATE FIRST PRODUCED: 5/4/2011	TEST DATE: 5/11/2011	HOURS TESTED: 24	TEST PRODUCTION RATES: →	OIL – BBL: 0	GAS – MCF: 1,510	WATER – BBL: 441	PROD. METHOD: FLOWING
CHOKE SIZE: 20/64	TBG. PRESS. 998	CSG. PRESS. 1,614	API GRAVITY	BTU – GAS	GAS/OIL RATIO	24 HR PRODUCTION RATES: →	INTERVAL STATUS: PROD

## INTERVAL B (As shown in Item #26)

DATE FIRST PRODUCED:	TEST DATE:	HOURS TESTED:	TEST PRODUCTION RATES: →	OIL – BBL:	GAS – MCF:	WATER – BBL:	PROD. METHOD:
CHOKE SIZE:	TBG. PRESS.	CSG. PRESS.	API GRAVITY	BTU – GAS	GAS/OIL RATIO	24 HR PRODUCTION RATES: →	INTERVAL STATUS:

## INTERVAL C (As shown in Item #26)

DATE FIRST PRODUCED:	TEST DATE:	HOURS TESTED:	TEST PRODUCTION RATES: →	OIL – BBL:	GAS – MCF:	WATER – BBL:	PROD. METHOD:
CHOKE SIZE:	TBG. PRESS.	CSG. PRESS.	API GRAVITY	BTU – GAS	GAS/OIL RATIO	24 HR PRODUCTION RATES: →	INTERVAL STATUS:

## INTERVAL D (As shown in Item #26)

DATE FIRST PRODUCED:	TEST DATE:	HOURS TESTED:	TEST PRODUCTION RATES: →	OIL – BBL:	GAS – MCF:	WATER – BBL:	PROD. METHOD:
CHOKE SIZE:	TBG. PRESS.	CSG. PRESS.	API GRAVITY	BTU – GAS	GAS/OIL RATIO	24 HR PRODUCTION RATES: →	INTERVAL STATUS:

## 32. DISPOSITION OF GAS (Sold, Used for Fuel, Vented, Etc.)

## 33. SUMMARY OF POROUS ZONES (Include Aquifers):

Show all important zones of porosity and contents thereof. Cored intervals and all drill-stem tests, including depth interval tested, cushion used, time tool open, flowing and shut-in pressures and recoveries.

## 34. FORMATION (Log) MARKERS:

Formation	Top (MD)	Bottom (MD)	Descriptions, Contents, etc.	Name	Top (Measured Depth)
GREEN RIVER	1,476				
BIRD'S NEST	1,750				
MAHOGANY	2,152				
WASATCH	4,793	7,470			
MESAVERDE	7,470	9,685	TD		

## 35. ADDITIONAL REMARKS (Include plugging procedure)

Attached is the chronological well history, perforation report and final survey. Completion chrono details individual frac stages.

## 36. I hereby certify that the foregoing and attached information is complete and correct as determined from all available records.

NAME (PLEASE PRINT) ANDREW LYTLETITLE REGULATORY ANALYSTSIGNATURE DATE 6/1/2011

This report must be submitted within 30 days of

- completing or plugging a new well
- drilling horizontal laterals from an existing well bore
- reentering a previously plugged and abandoned well
- significantly deepening an existing well bore below the previous bottom-hole depth
- recompleting to a different producing formation
- drilling hydrocarbon exploratory holes, such as core samples and stratigraphic tests

\* ITEM 20: Show the number of completions if production is measured separately from two or more formations.

\*\* ITEM 24: Cement Top – Show how reported top(s) of cement were determined (circulated (CIR), calculated (CAL), cement bond log (CBL), temperature survey (TS)).

Send to: Utah Division of Oil, Gas and Mining  
1594 West North Temple, Suite 1210  
Box 145801  
Salt Lake City, Utah 84114-5801

Phone: 801-538-5340

Fax: 801-359-3940

# US ROCKIES REGION

## Operation Summary Report

Well: NBU 921-2504BS RED		Spud Conductor: 1/4/2011	Spud Date: 1/13/2011
Project: UTAH-UINTAH		Site: NBU 921-25N PAD	Rig Name No: H&P 311/311, CAPSTAR 310/310
Event: DRILLING		Start Date: 1/2/2011	End Date: 2/15/2011
Active Datum: RKB @4,980.00ft (above Mean Sea Level)		UWI: SE/SW/0/9/S/21/E/25/0/0/26/PM/S/1156/W/0/2595/0/0	

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (ft)	Operation
1/12/2011	10:30 - 16:00	5.50	DRLSUR	01	A	P		CONDUCT SAFETY MEETING WITH RIG UP TRUCKS AND MOVE RIG TO NBU 921-25N PAD
	16:00 - 22:00	6.00	DRLSUR	01	B	P		RIG UP BACK YARD BOILER SUB DOG HOUSE, RAISE DERRICK. WHILE RIGGING UP WELDER MODIFIED BACK YARD FOR SKID PACKAGE
	22:00 - 0:00	2.00	DRLSUR	14	A	P		WELD ON CONDUCTOR AND RIG UP FLOW LINE
1/13/2011	0:00 - 2:00	2.00	DRLSUR	01	B	P		INSTALL TARPS AROUND SUB AND ALL WINTERIZING / BOILER LINES
	2:00 - 3:30	1.50	DRLSUR	06	A	P		PICK UP NEW MUD MOTOR, BIT, AND SHOCK SUB
	3:30 - 5:30	2.00	DRLSUR	02	C	P		SPUD WELL DRILL F/ 40' - 223' WOB 4-7 ROT 45-50 DHR 96 GPM 600 NO LOSSES
	5:30 - 8:00	2.50	DRLSUR	06	A	P		TOOH PICK UP DIRECTIONAL MONELS AND MWD TOOL ORIENT TO MUD MOTOR AND TIH
	8:00 - 11:00	3.00	DRLSUR	02	C	P		DRILL F/ 223' - 541' AVE ROP 106 FT HR WOB 20-22 ROT 45-55 DHR 96 GPM 600 OBP 1250 OFBP 950 NO LOSSES LAST SURVEY 2.69 DEG 180.16 AZI
	11:00 - 14:00	3.00	DRLSUR	08	B	Z		CHANGE OUT BROKEN TOP DRIVE LOCK
	14:00 - 14:30	0.50	DRLSUR	07	A	P		DAILY RIG SERVICE
	14:30 - 0:00	9.50	DRLSUR	02	C	P		DRILL F/541' - 1586' AVE ROP 110 FT HR WOB 20-22 ROT 45-55 DHR 96 GPM 600 OBP 1250 OFBP 950 NO LOSSES LAST SURVEY 17.94 DEG 125.41 AZI
1/14/2011	-		DRLSUR					CONDUCTOR CASING: Cond. Depth set: 40 Cement sx used: 28
								SPUD DATE/TIME: 1/13/2011 3:30
								SURFACE HOLE: Surface From depth: 40 Surface To depth: 2,595 Total SURFACE hours: 27.00 Surface Casing size: 8 5/8 # of casing joints ran: 58 Casing set MD: 2,562.0 # sx of cement: 200/225/350 Cement blend (ppg): 11.0/15.8/15.8 Cement yield (ft3/sk): 3.82/1.15/1.15 # of bbls to surface: 30 Describe cement issues:
	0:00 - 12:30	12.50	DRLSUR	02	C	P		DIRLL F/ 1586' - 2695' 1109 FT, 88.7 FPH, WOB-20-22, ROT45-55, GPM 600NO LOSSES, LAST SURVEY @2535-IMC 15.89, AZI 118.76, BOTTOM HOLE CLOSURE 498.71 ALONG AZIMUTH 124.89
	12:30 - 13:00	0.50	DRLSUR	05	C	P		CIRC BEFORE TRIP OUT TO RUN CSG
	13:00 - 14:30	1.50	DRLSUR	06	D	P		T.O.H TO RUN SURFACE CSG.
	14:30 - 15:00	0.50	DRLSUR	08	A	Z		REPAIR HYDRO HOSE
	15:00 - 16:00	1.00	DRLSUR	06	D	P		T.O.H . TO RUN CSG
	16:00 - 17:30	1.50	DRLSUR	01	E	P		LAY DOWN DIRECTIONAL TOOLS
	17:30 - 21:00	3.50	DRLSUR	12	A	P		CONDUCT SAFETY MTG,RU AND RUN 58 JTF 8 5/8 SURFACE CASING,SHOE @2562, FIBER BAFFLE @2516, NO CIRC

**US ROCKIES REGION**  
**Operation Summary Report**

Well: NBU 921-2504BS RED			Spud Conductor: 1/4/2011			Spud Date: 1/13/2011			
Project: UTAH-UINTAH			Site: NBU 921-25N PAD				Rig Name No: H&P 311/311, CAPSTAR 310/310		
Event: DRILLING			Start Date: 1/2/2011				End Date: 2/15/2011		
Active Datum: RKB @4,980.00ft (above Mean Sea Level)			UWI: SE/SW/0/9/S/21/E/25/0/0/26/PM/S/1156/W/0/2595/0/0						
Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (ft)	Operation	
	21:00 - 0:00	3.00	DRLSUR	12	B	P		SAFETY MTG W/SUPERIOR CEMENTORS, 2000 PSI TEST,PUMPED 75 BBL H2O SPACER, PUMPED 225 SKS @15.9#,FINAL PSI 200#, BUMPED PLUG W/ 600#, FLOAT HELD, CUT OFF ROT HEAD, TOP OUT W/ 200SKS @15.8#, W/1--# RUB RUB 25# SF. RIG RELEASED	
2/1/2011	18:00 - 0:00	6.00	DRLPRO	01	E	P		RD & PREP TO MOVE RIG TO LOCATION	
2/2/2011	0:00 - 13:30	13.50	RDMO	01	E	P		RIGGED DOWN BY HAND.	
	13:30 - 18:00	4.50	RDMO	01	E	P		TRUCKS AND CRANES ARRIVED. RIGGED UP CRANE AND REMOVED WIND WALLS. TRUCKS HAULED PIPE TUBS, CATWALK, BEAVER SLIDE, YELLOW DOG, ALL LOOSE PIPE AND PIPE RACKS. HAULED 10 LOADS WITH 1 BED TRUCK AND 4 HAUL TRUCKS.	
2/3/2011	18:00 - 0:00	6.00	RDMO	01	E	P		WAITED ON DAYLIGHT.	
	0:00 - 6:00	6.00	RDMO	01	E	P		WAIT ON DAYLIGHT	
	6:00 - 18:00	12.00	RDMO	01	E	P		CONTINUED TO RIG DOWN. HAULED BACKYARD OUT, RIGGED UP 2ND CRANE AT 1000 HRS. MAST DOWN AT 1330 AND OFF THE FLOOR AT 1500 HRS. RIGGED SUB DOWN TO THE CENTER STEEL. ALL OTHER PARTS ARE OFF OF THE OLD LOCATION. ON THE 921-25N PAD SET THE MUD TANKS, WATER TANKS, PROCESS TANK AND SHAKERS. HAVING TO RIGGING UP ON A DUMMY WELL 20' FROM THE FIRST WELL DUE TO THE SHORTNESS OF THE RESERVE PIT. WILL HAVE TO GET RIGGED UP AND SKID TO THE FIRST WELL. SLIGHT DAMAGE TO ONE OF THE FRAC TANKS PULLING IT OFF THE GROUND. MOVED CAMPS TO NEW LOCATION. SHUT DOWN FOR NIGHT.	
2/4/2011	18:00 - 0:00	6.00	RDMO	01	E	P		WAIT ON DAYLIGHT.	
	0:00 - 6:00	6.00	RDMO	01	E	P		WAIT ON DAYLIGHT TO RESUME RIG MOVE.	
	6:00 - 18:00	12.00	RDMO	01	A	P		DISASSEMBLED SUB AND HAULED TO NBU 921-25N PAD. HAD ENTIRE RIG OFF LOCATION AT 1230 HRS AND STARTED CLEANING LOCATION. SET MUD TANKS, UPRIGHT TANKS, VDR HOUSE, GENERATORS, AIR COMPRESSOR HOUSE, SKID RAILS, JACK BOXES, BOP DECK, PORCHES AND SOME WIND WALLS. ONCE WE GOT TO THE CENTER STEEL WE SHUT DOWN FOR NIGHT. TRENCHED LOCATION FOR DRAINAGE DITCHES.	
2/5/2011	18:00 - 0:00	6.00	MIRU	01	B	P		WAIT ON DAYLIGHT TO RESUME RIGGING UP RIG. HAULED WATER TO THE RESERVE PIT.	
	0:00 - 6:00	6.00	MIRU	01	B	P		WAIT ON DAYLIGHT TO RESUME RIG UP OPERATIONS.	
	6:00 - 17:30	11.50	MIRU	01	B	P		SET CENTER STEEL AND ASSEMBLED RIG. PUT DERRICK TOGETHER AND SET ON FLOOR. RAISED DERRICK AT 1530 HRS AND RELEASED ALL TRUCKS AND CRANES AT 1730 HRS. CONTINUED TO FILL RESERVE PIT. BROKE TOUR AFTER MAST WAS RAISED.	
2/6/2011	17:30 - 0:00	6.50	MIRU	01	B	P		CONTINUED RIGGING UP BY HAND WITH ONE CREW.	
	0:00 - 6:00	6.00	MIRU	01	B	P		CONTINUED TO RIG UP BY HAND.	
	6:00 - 8:00	2.00	MIRU	01	C	P		PREPARED RIG TO SKID DUE TO RESERVE PIT . HAD TO RIG UP 30' FROM FIRST WELL SO SHAKERS WOULD LINE UP.	
	8:00 - 10:00	2.00	MIRU	01	C	P		SKIDDED AND CENTERED RIG OVER WELL #1.	
	10:00 - 17:00	7.00	MIRU	14	A	P		NU BOPE	

**US ROCKIES REGION**  
**Operation Summary Report**

Well: NBU 921-25O4BS RED	Spud Conductor: 1/4/2011	Spud Date: 1/13/2011
Project: UTAH-UINTAH	Site: NBU 921-25N PAD	Rig Name No: H&P 311/311, CAPSTAR 310/310
Event: DRILLING	Start Date: 1/2/2011	End Date: 2/15/2011
Active Datum: RKB @4,980.00ft (above Mean Sea Level)		
UWI: SE/SW/0/9/S/21/E/25/0/0/26/PM/S/1156/W/0/2595/0/0		

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (ft)	Operation
	17:00 - 18:00	1.00	MIRU	15	A	P		RIGGED UP BOPE TESTER
	18:00 - 0:00	6.00	MIRU	15	A	P		TESTED BOPE. PRESSURE TEST PIPE RAMS, BLIND RAMS, IBOP, FLOOR VALVE, KILL LINE, & KILL LINE VALVES, BOP WING VALVES, HCR VALVE, CHOKE LINE INNER & OUTER CHOKE VALVES, & MANIFOLD 250 PSI LOW/ 5 MINUTES, 5K HIGH FOR 10 MINUTES, TEST ANNULAR 250 LOW/5 MINUTES, 2500 HIGH/10 MINUTES, TEST SUPER CHOKE. FUNCTION TEST CLOSING UNIT. PRESSURE TESTED SURFACE CASING TO 1500 PSI FOR 30 MINUTES THEN FILLED CHOKE LINES AND CHOKE MANIFOLD WITH METHANOL. INSTALLED WEAR BUSHING.
2/7/2011	0:00 - 1:30	1.50	DRLPRO	15	A	P		ATTEMPTED TO INSTALL ROTATING MOUSEHOLE. WOULD NOT LINE UP. TRIED REDIGGING PORTIONS OF IT, TRIED ADJUSTING CELLAR COVER, NO HELP. INSTALLED REGULAR MOUSEHOLE.
	1:30 - 2:00	0.50	DRLPRO	14	B	P		LOADED PIPE RACK AND STRAPPED BHA. REMOVED REGULAR MOUSEHOLE TO USE A PU MACHINE TO PICKUP THE BHA.
	2:00 - 5:00	3.00	DRLPRO	06	A	P		RIG SERVICE.
	5:00 - 7:00	2.00	DRLPRO	06	A	P		RIGGED UP LAYDOWN MACHINE TO PICK UP BHA AND DRILLPIPE TO TAG CEMENT.
	7:00 - 7:30	0.50	DRLPRO	07	A	P		MADE UP SECURITY FX65M, SERIAL #11620138 WITH 6-15S ON TO A SDI .23 REV/GAL, 1.5 DEGREE BEND, 7:8 LOBE, 6.4, 6.5" MUD MOTOR. PICKED UP/MADE UP DIRECTIONAL TOOLS, INSTALLED AND TEST E-FIELD TOOL, SCRIBED MUD MOTOR AND PICKED UP 30 JTS HWDP AND 45 JTS DP. TAGGED CEMENT AT 2485'. WASHED THRU AND TAGGED BAFFLE PLATE AT 2551'.
	7:30 - 8:30	1.00	DRLPRO	06	A	P		RIGGED DOWN LAYDOWN TRUCK AND INSTALLED ROTATING MOUSEHOLE. WE HAD MADE SOME MODIFICATIONS WITH A WELDER AND APPLIED A BIT MORE PRESSURE TO MAKE THE ROTATING MOUSEHOLE FIT.
	8:30 - 14:00	5.50	DRLPRO	06	A	P		DRILLED BAFFLE PLATE, SHOE TRACK AND SHOE.
	14:00 - 15:30	1.50	DRLPRO	06	A	P		DRILLED 2611'-3590', 979' IN 7 HRS, 139.8 FPH. MADE 10 SLIDES OR AT LEAST 1 SLIDE EVERY STD. SLIDE A TOTAL OF 158' IN 3.5 HRS. WOB WAS 15-18K, PUMP #1 AT 110 SPM, 495 GPM, MOTOR TURNING AT 114 RPM WITH TOP DRIVE AT 45 RPM FOR A TOTAL OF 159 RPM AT THE BIT. DIFFERENTIAL PRESSURE WAS 350-500 PSI. ON/OFF BOTTOM PUMP PRESSURE WAS 1750/1360 PSI. ON/OFF BOTTOM TORQUE WAS 9/4K. PU/SO/ROT WAS 124/90/111. CIRCULATING THE RESERVE PIT.
	15:30 - 17:00	1.50	DRLPRO	02	F	P		
	17:00 - 0:00	7.00	DRLPRO	02	D	P		
2/8/2011	0:00 - 6:00	6.00	DRLPRO	02	D	P		DRILLED 3590'-4439', 849' IN 6 HRS, 141.5 FPH. MADE 5 SLIDES, 90' TOTAL IN 1.5 HOURS TOTAL SLIDE TIME. WOB WAS 15-18K, PUMP #1 AT 110 SPM, 495 GPM, MOTOR TURNING AT 114 RPM WITH TOP DRIVE AT 45 RPM FOR A TOTAL OF 159 RPM AT THE BIT. DIFFERENTIAL PRESSURE WAS 350-500 PSI. ON/OFF BOTTOM PUMP PRESSURE WAS 1850/1600 PSI. ON/OFF BOTTOM TORQUE WAS 9/7K. PU/SO/ROT WAS 130/95/119. CIRCULATING THE RESERVE PIT.

**US ROCKIES REGION**  
**Operation Summary Report**

Well: NBU 921-2504BS RED		Spud Conductor: 1/4/2011		Spud Date: 1/13/2011	
Project: UTAH-UINTAH		Site: NBU 921-25N PAD		Rig Name No: H&P 311/311, CAPSTAR 310/310	
Event: DRILLING		Start Date: 1/2/2011		End Date: 2/15/2011	
Active Datum: RKB @4,980.00ft (above Mean Sea Level)		UWI: SE/SW/0/9/S/21/E/25/0/0/26/PM/S/1156/W/0/2595/0/0			

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (ft)	Operation
	6:00 - 16:30	10.50	DRLPRO	02	D	P		DRILLED 4439'-5477', 1038' IN 10.5 HRS, 98.9 FPH. MADE 6 SLIDES, 108' TOTAL FOOTAGE IN 2.75 HOURS TOTAL SLIDE TIME. WOB WAS 15-18K, PUMP #1 AT 110 SPM, 495 GPM, MOTOR TURNING AT 114 RPM WITH TOP DRIVE AT 45 RPM FOR A TOTAL OF 159 RPM AT THE BIT. DIFFERENTIAL PRESSURE WAS 350-450 PSI. ON/OFF BOTTOM PUMP PRESSURE WAS 2100/1700 PSI. ON/OFF BOTTOM TORQUE WAS 10/10K. PU/SO/ROT WAS 170/110/145. CIRCULATING THE RESERVE PIT, SLIGHT LOSSES.
	16:30 - 17:00	0.50	DRLPRO	07	A	P		RIG SERVICE
	17:00 - 18:30	1.50	DRLPRO	02	D	P		DRILLED 5477'-5750', 273' IN 1.5 HRS, 182 FPH. 100% ROTATING. SAME PARAMETERS AS ABOVE.
	18:30 - 19:00	0.50	DRLPRO	05	B	P		LOST RETURNS, PUMPED 80 BBLS, 25% LCM SWEEP, GOT 100% RETURNS BACK.
	19:00 - 0:00	5.00	DRLPRO	02	D	P		DRILLED 5750'-6422', 672' IN 5 HRS, 134.4 FPH. 100% ROTATING. WOB WAS 15-20K, PUMP #1 AT 110 SPM, 495 GPM, MOTOR TURNING AT 114 RPM WITH TOP DRIVE AT 45 RPM FOR A TOTAL OF 159 RPM AT THE BIT. DIFFERENTIAL PRESSURE WAS 350-450 PSI. ON/OFF BOTTOM PUMP PRESSURE WAS 2250/1820 PSI. ON/OFF BOTTOM TORQUE WAS 10/10K. PU/SO/ROT WAS 190/130/149. STARTED MUDDING UP AT 5995', MW IS 9.1 PPG, 36 VIS WITH 2% LCM.
2/9/2011	0:00 - 6:00	6.00	DRLPRO	02	D	P		DRILLED 6422'-6799', 377' IN 6 HRS, 62.8 FPH. MADE 1 SLIDE, 25 TOTAL FEET IN 1 HOUR. WOB WAS 15-20K, PUMP #1 AT 110 SPM, 495 GPM, MOTOR TURNING AT 114 RPM WITH TOP DRIVE AT 45 RPM FOR A TOTAL OF 159 RPM AT THE BIT. DIFFERENTIAL PRESSURE WAS 350-450 PSI. ON/OFF BOTTOM PUMP PRESSURE WAS 2250/2000 PSI. ON/OFF BOTTOM TORQUE WAS 9/9K. PU/SO/ROT WAS 195/135/153. MW IS 9.7 PPG, 35 VIS WITH 2% LCM. SLIGHT LOSSES.
	6:00 - 17:30	11.50	DRLPRO	02	D	P		DRILLED 6799'-7365', 566' IN 11.5 HRS, 49.2 FPH. MADE ONE SLIDE, 25' IN 1.83 HOURS. WOB WAS 15-20K, PUMP #1 AT 110 SPM, 495 GPM, MOTOR TURNING AT 114 RPM WITH TOP DRIVE AT 45 RPM FOR A TOTAL OF 159 RPM AT THE BIT. DIFFERENTIAL PRESSURE WAS 350-450 PSI. ON/OFF BOTTOM PUMP PRESSURE WAS 2750/2450 PSI. ON/OFF BOTTOM TORQUE WAS 8/10K. PU/SO/ROT WAS 215/135/161. MW IS 10.3 PPG, 37 VIS WITH 5% LCM.
	17:30 - 18:00	0.50	DRLPRO	07	A	P		RIG SERVICE.
	18:00 - 0:00	6.00	DRLPRO	02	D	P		DRILLED 7365'-7632', 267' IN 6 HRS, 44.5 FPH. MADE 1 SLIDE, 15 TOTAL FEET IN 35 MINUTES. WOB WAS 15-20K, PUMP #1 AT 90 SPM, 405 GPM, MOTOR TURNING AT 93 RPM WITH TOP DRIVE AT 45 RPM FOR A TOTAL OF 138 RPM AT THE BIT. DIFFERENTIAL PRESSURE WAS 300-400 PSI. ON/OFF BOTTOM PUMP PRESSURE WAS 2300/1880 PSI. ON/OFF BOTTOM TORQUE WAS 9/8K. PU/SO/ROT WAS 215/135/161. MW IS 10.5 PPG, 37 VIS WITH 7% LCM.

**US ROCKIES REGION**  
**Operation Summary Report**

Well: NBU 921-2504BS RED		Spud Conductor: 1/4/2011		Spud Date: 1/13/2011	
Project: UTAH-UINTAH		Site: NBU 921-25N PAD		Rig Name No: H&P 311/311, CAPSTAR 310/310	
Event: DRILLING		Start Date: 1/2/2011		End Date: 2/15/2011	
Active Datum: RKB @4,980.00ft (above Mean Sea Level)		UWI: SE/SW/0/9/S/21/E/25/0/0/26/PM/S/1156/W/0/2595/0/0			

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (ft)	Operation
2/10/2011	0:00 - 6:00	6.00	DRLPRO	02	D	P		DRILLED 7632'-7899', 267' IN 6 HRS, 44.5 FPH. 100% ROTATING. WOB WAS 18-22K, PUMP #1 AT 90 SPM, 405 GPM, MOTOR TURNING AT 93 RPM WITH TOP DRIVE AT 45 RPM FOR A TOTAL OF 138 RPM AT THE BIT. DIFFERENTIAL PRESSURE WAS 300-400 PSI. ON/OFF BOTTOM PUMP PRESSURE WAS 2300/1880 PSI. ON/OFF BOTTOM TORQUE WAS 9/8K. PU/SO/ROT WAS 220/140/166. MW IS 10.7 PPG, 37 VIS WITH 8% LCM.
	6:00 - 15:30	9.50	DRLPRO	02	D	P		DRILLED 7899'-8308', 409' IN 9.5 HRS, 43 FPH. MADE 1 SLIDE, 25 TOTAL FEET IN 1.25 TOTAL HOURS. WOB WAS 20-23K, PUMP #1 AT 90 SPM, 405 GPM, MOTOR TURNING AT 93 RPM WITH TOP DRIVE AT 45 RPM FOR A TOTAL OF 138 RPM AT THE BIT. DIFFERENTIAL PRESSURE WAS 300-400 PSI. ON/OFF BOTTOM PUMP PRESSURE WAS 2400/1950 PSI. ON/OFF BOTTOM TORQUE WAS 12/13K. PU/SO/ROT WAS 245/138/175. MW IS 11.5 PPG, 37 VIS WITH 10% LCM.
	15:30 - 16:00	0.50	DRLPRO	07	A	P		RIG SERVICE.
	16:00 - 0:00	8.00	DRLPRO	02	D	P		DRILLED 8308'-8617', 309' IN 8 HRS, 38.6 FPH. MADE 1 BRUTAL SLIDE, 21 TOTAL FEET IN 1.75 TOTAL HOURS. WOB WAS 20-23K, PUMP #1 AT 90 SPM, 405 GPM, MOTOR TURNING AT 93 RPM WITH TOP DRIVE AT 45 RPM FOR A TOTAL OF 138 RPM AT THE BIT. DIFFERENTIAL PRESSURE WAS 300-400 PSI. ON/OFF BOTTOM PUMP PRESSURE WAS 2500/2020 PSI. ON/OFF BOTTOM TORQUE WAS 13/13K. PU/SO/ROT WAS 250/143/177. MW IS 11.8 PPG, 41 VIS WITH 10% LCM. SLIGHT LOSSES.
2/11/2011	0:00 - 10:00	10.00	DRLPRO	02	D	P		DRILLED 8617'-9000', 383' IN 10 HRS, 38.3 FPH. 100% ROTATING. WOB WAS 20-23K, PUMP #1 AT 90 SPM, 405 GPM, MOTOR TURNING AT 93 RPM WITH TOP DRIVE AT 45 RPM FOR A TOTAL OF 138 RPM AT THE BIT. DIFFERENTIAL PRESSURE WAS 300-400 PSI. ON/OFF BOTTOM PUMP PRESSURE WAS 2600/2100 PSI. ON/OFF BOTTOM TORQUE WAS 13/13K. PU/SO/ROT WAS 260/153/187. MW IS 12.1 PPG, 41 VIS WITH 8% LCM. SLIGHT LOSSES.
	10:00 - 11:00	1.00	DRLPRO	05	C	P		CIRCULATED BOTTOMS UP. MW IS 12.1 PPG, 42 VIS WITH 8% LCM. FLOW CHECK WELL.
	11:00 - 16:00	5.00	DRLPRO	06	A	P		PUMPED 3 STANDS OUT, STARTED PULLING EASY. PUMP SLUG AND TRIP OUT OF THE HOLE. HAD 40,000 LBS OVERPULL UNTIL 4000', THEN HAD NO OVERPULL. FLOW CHECKED WELL AT CASING SHOE.
	16:00 - 17:00	1.00	DRLPRO	06	A	P		PULLED EFIELD TOOL, RACKED DIRECTIONAL TOOLS BACK. BROKE BIT OFF AND LD MUD MOTOR.
	17:00 - 19:00	2.00	DRLPRO	06	A	P		CHECKED ALIGNMENT OF THE RIG. DRAINED STACK AND SET PLUMB BOB FROM ROTARY TABLE TO WELLHEAD. PLUMB BOB NOT CENTERED IN CASING. SKIDDED RIG FORWARD TO ALIGN RIG. CHECK ALIGNMENT WITH PLUMB BOB AGAIN-GOOD.
	19:00 - 21:00	2.00	DRLPRO	06	A	P		MADE UP HUGHES Q506F BIT, SERIAL #7019036 W/6-16S, MONEL COLLAR AND A SDI .14 RPG, 7:8, 3.3 STRAIGHT MUD MOTOR. PUMP THRU MOTOR AT SURFACE AND BLOW DOWN.
	21:00 - 0:00	3.00	DRLPRO	06	A	P		TRIP IN THE HOLE, FILL AT 2600', 5500'.



**US ROCKIES REGION**  
**Operation Summary Report**

Well: NBU 921-2504BS RED	Spud Conductor: 1/4/2011	Spud Date: 1/13/2011
Project: UTAH-UINTAH	Site: NBU 921-25N PAD	Rig Name No: H&P 311/311, CAPSTAR 310/310
Event: DRILLING	Start Date: 1/2/2011	End Date: 2/15/2011
Active Datum: RKB @4,980.00ft (above Mean Sea Level)		
UWI: SE/SW/0/9/S/21/E/25/0/0/26/PM/S/1156/W/0/2595/0/0		

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (ft)	Operation
2/12/2011	0:00 - 3:00	3.00	DRLPRO	06	A	P		CONTINUED TRIPPING IN THE HOLE, NO TITE SPOTS. FILLED AT 7500'.
	3:00 - 5:30	2.50	DRLPRO	06	A	P		WASHED AND REAMED FROM 8344'-9000', NOT REAL HARD REAMING. NO FILL. NEVER SAW ANY BOTTOMS UP GAS.
	5:30 - 15:00	9.50	DRLPRO	02	D	P		DRILLED 9000'-9382', 382' IN 9.5 HRS, 40.2 FPH. WOB WAS 22-24K, PUMP #1 AT 110 SPM, 495 GPM, MOTOR TURNING AT 69 RPM WITH TOP DRIVE AT 45 RPM FOR A TOTAL OF 114 RPM AT THE BIT. DIFFERENTIAL PRESSURE WAS 300-400 PSI. ON/OFF BOTTOM PUMP PRESSURE WAS 2600/2100 PSI. ON/OFF BOTTOM TORQUE WAS 13/13K. PU/SO/ROT WAS 250/143/181. MW IS 12.3 PPG, 43 VIS WITH 10% LCM. NO LOSSES. RIG SERVICE.
	15:00 - 15:30	0.50	DRLPRO	07	A	P		
	15:30 - 21:30	6.00	DRLPRO	02	D	P		DRILLED 9382'-9685', 303' IN 6 HRS, 50.5 FPH. WOB WAS 22-24K, PUMP #1 AT 110 SPM, 495 GPM, MOTOR TURNING AT 69 RPM WITH TOP DRIVE AT 45 RPM FOR A TOTAL OF 114 RPM AT THE BIT. DIFFERENTIAL PRESSURE WAS 300-400 PSI. ON/OFF BOTTOM PUMP PRESSURE WAS 3000/2700 PSI. ON/OFF BOTTOM TORQUE WAS 13/13K. PU/SO/ROT WAS 257/150/187. MW IS 12.5 PPG, 44 VIS WITH 10% LCM. NO LOSSES. CIRCULATE AND CONDITION MUD, CIRCULATED 2 BOTTOMS UP, NO GAS. FINAL MW WAS 12.5 PPG, 44 VIS WITH 10% LCM. FLOW CHECKED WELL, NO FLOW.
	21:30 - 23:30	2.00	DRLPRO	05	C	P		STRAIGHT PULLED 5 STDs THEN PUMPED SLUG. TRIP OUT OF HOLE.
	23:30 - 0:00	0.50	DRLPRO	06	E	P		
2/13/2011	0:00 - 9:30	9.50	DRLPRO	06	E	P		WIPER TRIP TO THE SHOE, FLOW CHECKED AT THE SHOE. NO TITE SPOTS, OVERPULLS OR WASHING/REAMING. NO FILL.
	9:30 - 12:00	2.50	DRLPRO	05	C	P		CIRCULATE AND CONDITIONED MUD. CIRCULATED 2 BOTTOMS UP, NO GAS. MW WAS 12.5 PPG, 41 VIS WITH 10% LCM.
	12:00 - 12:30	0.50	DRLPRO	10	B	P		DROPPED SURVEY TOOL AND FLOW CHECKED WELL, NO FLOW.
	12:30 - 18:00	5.50	DRLPRO	06	B	P		TRIPPED OUT OF THE HOLE, NO TITE SPOTS OR OVER PULLS. FLOW CHECKED WELL AT THE SHOE. PULLED ROTATING HEAD AND INSTALLED A TRIP NIPPLE. BROKE BIT OFF, PU A JOINT OF DP AND RACKED BACK MONEL AND STRAIGHT MUD MOTOR. RECOVERED SURVEY TOOL, MISRUN.
	18:00 - 0:00	6.00	DRLPRO	11	D	P		RIGGED UP HALLIBURTON AND RAN TRIPLE COMBO LOG SWEEP. LOGGERS TD WAS 9682' (DRILLERS 9685'), BHT WAS 180 DEGREES. BASE OF SURFACE CASING WAS 2584'. RAN SPECTRAL DENSITY LOG FROM TD TO BASE OF SURFACE CASING, RAN DUAL SPACED NEUTRON FROM TD TO SURFACE CASING. RAN AN ARRAY COMPENSATED TRUE RESISTIVITY FROM TD TO SURFACE SHOE. RAN A CALIPER LOG FROM TD TO SURFACE CASING SHOE AND A GAMMA RAY FROM TD TO 200'. RAN BOREHOLE VOLUME LOG. NO TITE SPOTS WENT STRAIGHT TO BOTTOM.
2/14/2011	0:00 - 2:30	2.50	CSG	08	A	Z		DRAWWORKS FROZEN/THAW RESISTOR GRID.
	2:30 - 3:00	0.50	CSG	06	D	P		PULL WEAR BUSHING.
	3:00 - 3:30	0.50	CSG	07	A	P		RIG SERVICE
	3:30 - 4:00	0.50	CSG	08	A	Z		THAW RESISTOR GRID AGAIN.

**US ROCKIES REGION**  
**Operation Summary Report**

Well: NBU 921-2504BS RED		Spud Conductor: 1/4/2011	Spud Date: 1/13/2011
Project: UTAH-UINTAH		Site: NBU 921-25N PAD	Rig Name No: H&P 311/311, CAPSTAR 310/310
Event: DRILLING		Start Date: 1/2/2011	End Date: 2/15/2011
Active Datum: RKB @4,980.00ft (above Mean Sea Level)		UWI: SE/SW/0/9/S/21/E/25/0/0/26/PM/S/1156/W/0/2595/0/0	

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (ft)	Operation
	4:00 - 7:00	3.00	CSG	12	A	P		RIG UP CASING CREW AND EQUIPMENT. CHANGED OUT BALES AND ELEVATORS.
	7:00 - 14:00	7.00	CSG	12	C	P		MADE UP WITH THREAD LOCK, SHOE, SHOE TRACK AND FLOAT COLLAR. INSTALLED CENTRALIZER ON SHOE TRACK. RAN 229 JTS OF 4.5", I80, 11.6#, LT&C, R3. SET 21' MARKER JOINTS AT 7356' AND 4721'. SET CASING AT 9672' WITH FLOAT COLLAR AT 9630'. FILLED AND CIRCULATE CASING AT THE SURFACE CASING SHOE, 4659' AND 7505'.
	14:00 - 15:30	1.50	CSG	12	F	P		FILLED PIPE AND STARTED CIRCULATING WELL. RD CASING CREW AND EQUIPMENT, RIGGING UP CEMENTERS. CIRCULATING WITH FULL RETURNS AT 360 GPM (8 BPM) AT 1050 PSI. NEVER SAW ANY BOTTOMS UP GAS, MW IS 12.5 PPG, 43 VIS WITH 10% LCM.
	15:30 - 17:30	2.00	CSG	12	E	P		PRESSURE TESTED LINES TO 5000 PSI. PUMPED 40 BBLS OF H2O SPACER AHEAD, PUMPED 186.6 BBLS (530 SX OF 12.5#, 1.98 CFT/SX, 10.71 GAL/SK) LEAD ECONO CEMENT. PUMPED 256 BBLS (1150 SX OF 14.3#, 1.25 YD, 5.41 GAL/SK) POZ PREMIUM 50/50 TAIL CEMENT. SHUT DOWN AND WASHED LINES, DROP 4.5" TOP PLUG, PUMP 149.3 BBLS OF H2O TREATED WITH BIOCIDES AND CLAY INHIBITOR. BUMPED PLUG AT 2200 PSI, PRESSURED UP CSG TO 2910 PSI AND HELD FOR 5 MIN. RELEASED PRESSURE AND FLOATS HELD, FLOWED BACK 1.75 BBLS. EST TOC TAIL @ 4300', LEAD @ 900'. HAD 100% RETURNS, HAD +/- 5 BBLS SPACER WATER BACK TO SURFACE.
	17:30 - 18:30	1.00	CSG	12	B	P		HELD SAFETY MEETING AND RIGGED DOWN CEMENTERS.
	18:30 - 21:30	3.00	CSG	12	C	P		ND BOPE, PICK UP BOP STACK AND SET C22 SLIPS WITH 100K. CUT OFF CASING AND LD JOINT.
	21:30 - 22:30	1.00	CSG	01	C	P		PREPARE RIG TO SKID. RELEASED RIG AT 2230 HRS ON MONDAY FEBRUARY 14TH.

**US ROCKIES REGION**  
**Operation Summary Report**

Well: NBU 921-25O4BS RED		Spud Conductor: 1/4/2011	Spud Date: 1/13/2011
Project: UTAH-UINTAH	Site: NBU 921-25N PAD		Rig Name No: H&P 311/311, CAPSTAR 310/310
Event: DRILLING	Start Date: 1/2/2011	End Date: 2/15/2011	
Active Datum: RKB @4,980.00ft (above Mean Sea Level)		UWI: SE/SW/0/9/S/21/E/25/0/0/26/PM/S/1156/W/0/2595/0/0	

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (ft)	Operation
	22:30 - 22:30	0.00	CSG					<p>CONDUCTOR CASING: Cond. Depth set: 40 Cement sx used: 28</p> <p>SPUD DATE/TIME: 1/13/2011 3:30</p> <p>SURFACE HOLE: 11 Surface From depth: 40 Surface To depth: 2,695 Total SURFACE hours: 27.00 Surface Casing size: 8 5/8 # of casing joints ran: 58 Casing set MD: 2,562.0 # sx of cement: 225+200 Cement blend (ppg): 15.9/15.8 Cement yield (ft3/sk): 1.15 # of bbls to surface: 0 Describe cement issues: NONE Describe hole issues: NONE</p> <p>PRODUCTION: Rig Move/Skid start date/time: 2/1/2011 18:00 Rig Move/Skid finish date/time: 2/6/2011 6:00 Total MOVE hours: 108.0 Prod Rig Spud date/time: 2/7/2011 15:30 Rig Release date/time: 2/14/2011 22:30 Total SPUD to RR hours: 175.0 Planned depth MD 9,716 Planned depth TVD 9,532 Actual MD: 9,685 Actual TVD: 9,540 Open Wells \$: \$971,678 AFE \$: \$773,711 Open wells \$/ft: \$100.33</p> <p>PRODUCTION HOLE: 7.875 Prod. From depth: 2,611 Prod. To depth: 9,685 Total PROD hours: 102 Log Depth: 9682 Float Collar Top Depth: 9630 Production Casing size: 4 1/2 # of casing joints ran: 229 Casing set MD: 9,672.0 # sx of cement: 530+1150=1680 Cement blend (ppg): 12.5/14.3 Cement yield (ft3/sk): 1.98/1.25 Est. TOC (Lead &amp; Tail) or 2 Stage : LEAD@900', TAIL@4300' Describe cement issues: NONE Describe hole issues: NONE</p> <p>DIRECTIONAL INFO: KOP: 292 Max angle: 19.01@3246' Departure: 1160'@9685' Max dogleg MD: 2.45@5512'</p>

## 1 General

### 1.1 Customer Information

Company	US ROCKIES REGION
Representative	
Address	

### 1.2 Well Information

Well	NBU 921-25O4BS RED		
Common Name	NBU 921-25O4BS		
Well Name	NBU 921-25O4BS	Wellbore No.	OH
Report No.	1	Report Date	4/14/2011
Project	UTAH-UINTAH	Site	NBU 921-25N PAD
Rig Name/No.		Event	COMPLETION
Start Date	4/14/2011	End Date	5/4/2011
Spud Date	1/13/2011	Active Datum	RKB @4,980.00ft (above Mean Sea Level)
UWI	SE/SW/0/9/S/21/E/25/0/0/26/PM/S/1156/W/0/2595/0/0		

### 1.3 General

Contractor	CASEDHOLE SOLUTIONS	Job Method	PERFORATE	Supervisor	DAVE DANIELS
Perforated Assembly	PRODUCTION CASING	Conveyed Method	WIRELINE		

### 1.4 Initial Conditions

### 1.5 Summary

Fluid Type		Fluid Density		Gross Interval	7,486.0 (ft)-9,540.0 (ft)	Start Date/Time	4/25/2011 12:00AM
Surface Press		Estimate Res Press		No. of Intervals	25	End Date/Time	4/25/2011 12:00AM
TVD Fluid Top		Fluid Head		Total Shots	163	Net Perforation Interval	43.00 (ft)
Hydrostatic Press		Press Difference		Avg Shot Density	3.79 (shot/ft)	Final Surface Pressure	
Balance Cond	NEUTRAL					Final Press Date	

## 2 Intervals

### 2.1 Perforated Interval

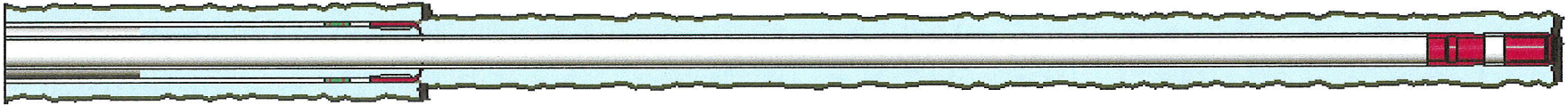
Date	Formation/ Reservoir	CCL@ (ft)	CCL-T S (ft)	MD Top (ft)	MD Base (ft)	Shot Density (shot/ft)	Misfires/ Add. Shot	Diameter (in)	Carr Type /Carr Manuf	Carr Size (in)	Phasing (°)	Charge Desc /Charge Manufacturer	Charge Weight (gram)	Reason	Misrun
12:00AM	MESAVERDE/			7,486.0	7,488.0	4.00		0.360	EXP/	3.375	90.00		23.00	PRODUCTIO N	

## 2.1 Perforated Interval (Continued)

Date	Formation/ Reservoir	CCL@ (ft)	CCL-T S (ft)	MD Top (ft)	MD Base (ft)	Shot Density (shot/ft)	Misfires/ Add. Shot	Diameter (in)	Carr Type /Carr Manuf	Carr Size (in)	Phasing (°)	Charge Desc /Charge Manufacturer	Charge Weight (gram)	Reason	Misrun
12:00AMMESAVERDE/				7,504.0	7,506.0	4.00		0.360	EXP/	3.375	90.00		23.00	PRODUCTION	
12:00AMMESAVERDE/				7,555.0	7,557.0	4.00		0.360	EXP/	3.375	90.00		23.00	PRODUCTION	
12:00AMMESAVERDE/				7,631.0	7,635.0	4.00		0.360	EXP/	3.375	90.00		23.00	PRODUCTION	
12:00AMMESAVERDE/				7,698.0	7,700.0	4.00		0.360	EXP/	3.375	90.00		23.00	PRODUCTION	
12:00AMMESAVERDE/				8,130.0	8,131.0	4.00		0.360	EXP/	3.375	90.00		23.00	PRODUCTION	
12:00AMMESAVERDE/				8,146.0	8,147.0	4.00		0.360	EXP/	3.375	90.00		23.00	PRODUCTION	
12:00AMMESAVERDE/				8,207.0	8,208.0	4.00		0.360	EXP/	3.375	90.00		23.00	PRODUCTION	
12:00AMMESAVERDE/				8,248.0	8,249.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTION	
12:00AMMESAVERDE/				8,259.0	8,260.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTION	
12:00AMMESAVERDE/				8,274.0	8,275.0	4.00		0.360	EXP/	3.375	90.00		23.00	PRODUCTION	
12:00AMMESAVERDE/				8,372.0	8,374.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTION	
12:00AMMESAVERDE/				8,420.0	8,421.0	4.00		0.360	EXP/	3.375	90.00		23.00	PRODUCTION	
12:00AMMESAVERDE/				8,426.0	8,429.0	4.00		0.360	EXP/	3.375	90.00		23.00	PRODUCTION	
12:00AMMESAVERDE/				8,640.0	8,643.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTION	
12:00AMMESAVERDE/				8,698.0	8,700.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTION	
12:00AMMESAVERDE/				8,760.0	8,762.0	4.00		0.360	EXP/	3.375	90.00		23.00	PRODUCTION	
12:00AMMESAVERDE/				8,968.0	8,969.0	4.00		0.360	EXP/	3.375	90.00		23.00	PRODUCTION	
12:00AMMESAVERDE/				9,044.0	9,046.0	4.00		0.360	EXP/	3.375	90.00		23.00	PRODUCTION	
12:00AMMESAVERDE/				9,090.0	9,091.0	4.00		0.360	EXP/	3.375	90.00		23.00	PRODUCTION	
12:00AMMESAVERDE/				9,159.0	9,160.0	4.00		0.360	EXP/	3.375	90.00		23.00	PRODUCTION	
12:00AMMESAVERDE/				9,171.0	9,172.0	4.00		0.360	EXP/	3.375	90.00		23.00	PRODUCTION	

**2.1 Perforated Interval (Continued)**

Date	Formation/ Reservoir	CCL@ (ft)	CCL-T S (ft)	MD Top (ft)	MD Base (ft)	Shot Density (shot/ft)	Misfires/ Add. Shot	Diamete r (in)	Carr Type /Carr Manuf	Carr Size (in)	Phasing (°)	Charge Desc /Charge Manufacturer	Charge Weight (gram)	Reason	Misrun
12:00AM	MESAVERDE/			9,404.0	9,405.0	4.00		0.360	EXP/	3.375	90.00		23.00	PRODUCTIO N	
12:00AM	MESAVERDE/			9,444.0	9,447.0	4.00		0.360	EXP/	3.375	90.00		23.00	PRODUCTIO N	
12:00AM	MESAVERDE/			9,538.0	9,540.0	4.00		0.360	EXP/	3.375	90.00		23.00	PRODUCTIO N	

**3 Plots****3.1 Wellbore Schematic**

# US ROCKIES REGION

## Operation Summary Report

Well: NBU 921-2504BS RED		Spud Conductor: 1/4/2011	Spud Date: 1/13/2011
Project: UTAH-UINTAH		Site: NBU 921-25N PAD	Rig Name No: SWABBCO 8/8
Event: COMPLETION		Start Date: 4/14/2011	End Date: 5/4/2011
Active Datum: RKB @4,980.00ft (above Mean Sea Level)		UWI: SE/SW/0/9/S/21/E/25/0/0/26/PM/S/1156/W/0/2595/0/0	

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (ft)	Operation
4/21/2011	7:00 - 7:15	0.25	COMP	48		P		HSM. HIGH PSI LINES & WL SAFETY.
	7:15 - 18:00	10.75	COMP	33	C	P		MIRU B&C QUICK TEST. PSI TEST CSG & BOTH FRAC VALVE T/ 1000 PSI FOR 15 MIN. LOST 13 PSI. PSI TEST T/ 3500 PSI FOR 15 MIN. LOST 21 PSI. PSI TEST T/ 7000 PSI FOR 30 MIN. LOST 52 PSI. BLEED OFF PSI. SWIFWE.
4/25/2011	7:00 - 15:00	8.00	COMP	36	B	P		PERF STG 1)PU 3 1/8 EXP GUN, 23 GM, .36 HOLE SIZE. 90 DEG PHASING. RIH PERF AS PER STG 1 PERF DESIGN.
4/26/2011	6:45 - 7:00	0.25	COMP	48		P		HSM, HIGH PSI LINES & WL SAFETY.
	7:00 - 18:00	11.00	COMP	36	B	P		FRAC STG 1)WHP 1472 PSI, BRK 3635 PSI @ 4.4 BPM. ISIP 2878 PSI, FG .74. PUMP 100 BBLS @ 39.5 BPM @ 6273 PSI = 60% HOLES OPEN. ISIP 2935 PSI, FG .75, NPI 57 PSI. MP 6675 PSI, MR 45.9 BPM, AP 6360 PSI, AR 39.6 BPM, PMP 894 BBLS SW & 9111 LBS OF 30/50 SND & 5064 LBS OF 20/40 SLC SND. TOTAL PROP 14,175 LBS. SWI, X-OVER FOR WL.  PERF STG 2)PU 4 1/2 8K HAL CBP & 3 1/8 EXP GUN, 23 GM, .36 HOLE SIZE. 90 DEG PHASING. RIH SET CBP @ 9222' P/U PERF AS PER STG 2 PERF PROC. POOH.  FRAC STG 2)WHP 1208 PSI, BRK 2555 PSI @ 6.8 BPM. ISIP 2094 PSI, FG .67. PUMP 100 BBLS @ 46 BPM @ 5429 PSI = 75% HOLES OPEN. ISIP 2758 PSI, FG .74, NPI 664 PSI. MP 6597 PSI, MR 50.3 BPM, AP 5578 PSI, AR 48.7 BPM, PMP 581 BBLS SW & 5613 LBS OF 30/50 SND & 5370 LBS OF 20/40 SLC SND. TOTAL PROP 10,983 LBS. SWI, X-OVER FOR WL.  PERF STG 3)PU 4 1/2 8K HAL CBP & 3 1/8 EXP GUN, 23 GM, .36 HOLE SIZE. 90 & 120 DEG PHASING. RIH SET CBP @ 8812' P/U PERF AS PER STG 3 PERF DESIGN. POOH.  FRAC STG 3)WHP 1025 PSI, BRK 2343 PSI @ 3.8 BPM. ISIP 1592 PSI, FG .62. PUMP 100 BBLS @ 52.5 BPM @ 5707 PSI = 79% HOLES OPEN. ISIP 2647 PSI, FG .74, NPI 1055 PSI. MP 6712 PSI, MR 53.4 BPM, AP 5505 PSI, AR 52.2 BPM, PMP 993 BBLS SW & 16,464 LBS OF 30/50 SND & 4271 LBS OF 20/40 SLC SND. TOTAL PROP 20,735 LBS. SWI, X-OVER FOR WL.  PERF STG 4)PU 4 1/2 8K HAL CBP & 3 1/8 EXP GUN, 23 GM, .36 HOLE SIZE. 90 & 120 DEG PHASING. RIH SET CBP @ 8479' P/U PERF AS PER STG 4 PERF DESIGN. POOH.



**US ROCKIES REGION**  
**Operation Summary Report**

Well: NBU 921-25O4BS RED		Spud Conductor: 1/4/2011	Spud Date: 1/13/2011
Project: UTAH-UINTAH		Site: NBU 921-25N PAD	Rig Name No: SWABBCO 8/8
Event: COMPLETION		Start Date: 4/14/2011	End Date: 5/4/2011
Active Datum: RKB @4,980.00ft (above Mean Sea Level)		UWI: SE/SW/0/9/S/21/E/25/0/0/26/PM/S/1156/W/0/2595/0/0	

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (ft)	Operation
4/27/2011	7:45 - 18:00	10.25	COMP	36	B	P		<p>FRAC STG 4)WHP 1430 PSI, BRK 3165 PSI @ 4.7 BPM. ISIP 2206 PSI, FG .70. PUMP 100 BBLS @ 44.7 BPM @ 5572 PSI = 76% HOLES OPEN. ISIP 2705 PSI, FG .76, NPI 499 PSI. MP 6561 PSI, MR 51.8 BPM, AP 5474 PSI, AR 50.9 BPM, PMP 605 BBLS SW &amp; 6173 LBS OF 30/50 SND &amp; 4994 LBS OF 20/40 SLC SND. TOTAL PROP 11,167 LBS. SWI, X-OVER FOR WL.</p> <p>PERF STG 5)PU 4 1/2 8K HAL CBP &amp; 3 1/8 EXP GUN, 23 GM, .36 HOLE SIZE. 90 &amp; 120 DEG PHASING. RIH SET CBP @ 8320'. PERF AS PER STG 5 PERF DESIGN. POOH.</p> <p>FRAC STG 5) PUMPED 13 BBLS OF PAD. HAD T/ SHUT DOWN T/ FIX LEAK ON FRAC LINE BELOW N2 POP-OFF. ( 1 hr 4 min DOWN TIME. ) WHP 1586 PSI, BRK 3146 PSI @ 4.4 BPM. ISIP 2050 PSI, FG .69. PUMP 100 BBLS @ 51 BPM @ 5909 PSI = 82% HOLES OPEN. ISIP 2525 PSI, FG .75, NPI 475 PSI. MP 6444 PSI, MR 51.8 BPM, AP 5156 PSI, AR 51 BPM, PMP 756 BBLS SW &amp; 8939 LBS OF 30/50 SND &amp; 4896 LBS OF 20/40 SLC SND. TOTAL PROP 13,835 LBS. SWI, X-OVER FOR WL.</p> <p>PERF STG 6)PU 4 1/2 8K HAL CBP &amp; 3 1/8 EXP GUN, 23 GM, .36 HOLE SIZE. 90 DEG PHASING. RIH SET CBP @ 7750'. PERF AS PER STG 6 PERF DESIGN. POOH.</p> <p>FRAC STG 6)WHP 1176 PSI, BRK 2509 PSI @ 3.9 BPM. ISIP 1930 PSI, FG .69. PUMP 100 BBLS @ 49.9 BPM @ 5305 PSI = 79% HOLES OPEN. ISIP 2187 PSI, FG .72, NPI 257 PSI. MP 5436 PSI, MR 50.5 BPM, AP 4448 PSI, AR 50.1 BPM, PMP 799 BBLS SW &amp; 10,535 LBS OF 30/50 SND &amp; 6166 LBS OF 20/40 SLC SND. TOTAL PROP 16,701 LBS. SWI, X-OVER FOR WL.</p> <p>PERF STG 7)PU 4 1/2 8K HAL CBP &amp; 3 1/8 EXP GUN, 23 GM, .36 HOLE SIZE. 90 DEG PHASING. RIH SET CBP @ 7587'. PERF AS PER STG 7 PERF DESIGN. POOH.</p>

**US ROCKIES REGION**  
**Operation Summary Report**

Well: NBU 921-2504BS RED		Spud Conductor: 1/4/2011	Spud Date: 1/13/2011
Project: UTAH-UINTAH		Site: NBU 921-25N PAD	Rig Name No: SWABBCO 8/8
Event: COMPLETION		Start Date: 4/14/2011	End Date: 5/4/2011
Active Datum: RKB @4,980.00ft (above Mean Sea Level)		UWI: SE/SW/0/9/S/21/E/25/0/0/26/PM/S/1156/W/0/2595/0/0	

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (ft)	Operation
4/28/2011	9:00 - 18:00	9.00	COMP	36	B	P		FRAC STG 7)WHP 998 PSI, BRK 2857 PSI @ 3.9 BPM. ISIP 1561 PSI, FG .65. PUMP 100 BBLS @ 50.9 BPM @ 4365 PSI = 95% HOLES OPEN. ISIP 2388 PSI, FG .76, NPI 827 PSI. MP 5000 PSI, MR 51.5 BPM, AP 4211 PSI, AR 49.7 BPM, PMP 1486 BBLS SW & 26,994 LBS OF 30/50 SND & 5080 LBS OF 20/40 SLC SND. TOTAL PROP 32,074 LBS. SWI, X-OVER FOR WL.  PU 4 1/2 8K HAL CBP. RIH SET CBP @ 7436'. POOH. DONE FRACING THIS WELL.  TOTAL SAND = 119,670 LBS TOTAL CLFL = 6114 BBLS TOTAL SCALE = 674 GAL TOTAL BIO =160 GAL  HSM, MOVING RIG & EQUIP
5/3/2011	7:00 - 7:30	0.50	COMP	48		P		MIRU F/ NBU 920-12K, ND WH NU BOPS, RU FLOOR & TBG EQUIP.
	7:30 - 10:30	3.00	COMP	30	A	P		PU 37/8 BIT, POBS & 234 JTS 23/8 L-80 OFF FLOAT EOT @ 7427 ' RU DRLG EQUIP, CHANGED OUT PIPE RAMS IN BOPS, BROKE CIRC CONVENTIONAL, TEST BOPS TO 3,000# FOR 15 MIN LOST 30 # RIH.
	10:30 - 15:00	4.50	COMP	31	I	P		C/O 15' SAND TAG 1ST PLUG @ 7436' DRL PLG IN 6 MIN 600# PSI INCREASE RIH.
	15:00 - 17:00	2.00	COMP	44	C	P		C/O 30' SAND TAG 2ND PLUG @ 7587' DRL PLG IN 4 MIN 200# PSI INCREASE RIH  C/O 30' SAND TAG 3RD PLUG @ 7730' DRL PLG IN 6 MIN 700# PSI INCREASE RIH 1 JT EOT @ 7776 ' SWI LOCK RAMS SDFN
5/4/2011	7:00 - 7:30	0.50	COMP	48		P		HSM, DRILLING PLUGS & LANDING TBG.

**US ROCKIES REGION**  
**Operation Summary Report**

Well: NBU 921-2504BS RED		Spud Conductor: 1/4/2011	Spud Date: 1/13/2011
Project: UTAH-UINTAH	Site: NBU 921-25N PAD		Rig Name No: SWABBCO 8/8
Event: COMPLETION	Start Date: 4/14/2011	End Date: 5/4/2011	
Active Datum: RKB @4,980.00ft (above Mean Sea Level)		UWI: SE/SW/0/9/S/21/E/25/0/0/26/PM/S/1156/W/0/2595/0/0	

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (ft)	Operation
	7:30 - 11:30	4.00	COMP	44	C	P		<p>SICP 1800 # PSI, OPEN CSG TO PIT, RIH.</p> <p>C/O 20' SAND TAG 4TH PLUG @ 8305' DRL PLG IN 8 MIN 900# PSI INCREASE RIH</p> <p>C/O 30' SAND TAG 5TH PLUG @ 8459' DRL PLG IN 4 MIN 400# PSI INCREASE RIH</p> <p>C/O 15' SAND TAG 6TH PLUG @ 8792' DRL PLG IN 4 MIN 1000# PSI INCREASE RIH</p> <p>C/O 30' SAND TAG 7TH PLUG @ 9205' DRL PLG IN 5 MIN 700# PSI INCREASE. RIH</p> <p>C/O TO @ 9627' CIRC CLEAN, RACK OUT SWIVEL. L/D 23 JTS, LAND TBG ON 281 JTS 23/8 L-80. RD FLOOR, ND BOPS NU WH. PUMP OFF BIT, LET WELL SET FOR 30 MIN FOR BIT TO FALL. TURN WELL OVER TO FB CREW. RIG DWN SICP = 1800    FTP = 100</p> <p>KB = 25' HANGER 41/16 = .83' 322 JTS 23/8 L-80 = 8895.23'    ( SURFAC VALVE LOCKED OPEN W/ POPOFF ASSEMBLY ) 1.875 X/N &amp; POBS = 2.20' EOT @ 8923.26'</p> <p>TWTR = 6354 BBLS TWR = 1200 BBLS TWLTR = 5154 BBLS</p> <p>344 JTS HAULED OUT 281 LANDED 63 TO RETURN WELL TURNED TO SALES @ 1200 HR ON 5/4/11 - 516 MCFD, 2040 BWPF, CP 1800#, FTP 1400#, CK 20/64"</p>
	12:00 - 12:00	0.00	PROD	50				

WELL DETAILS: NBU 921-25O4BS

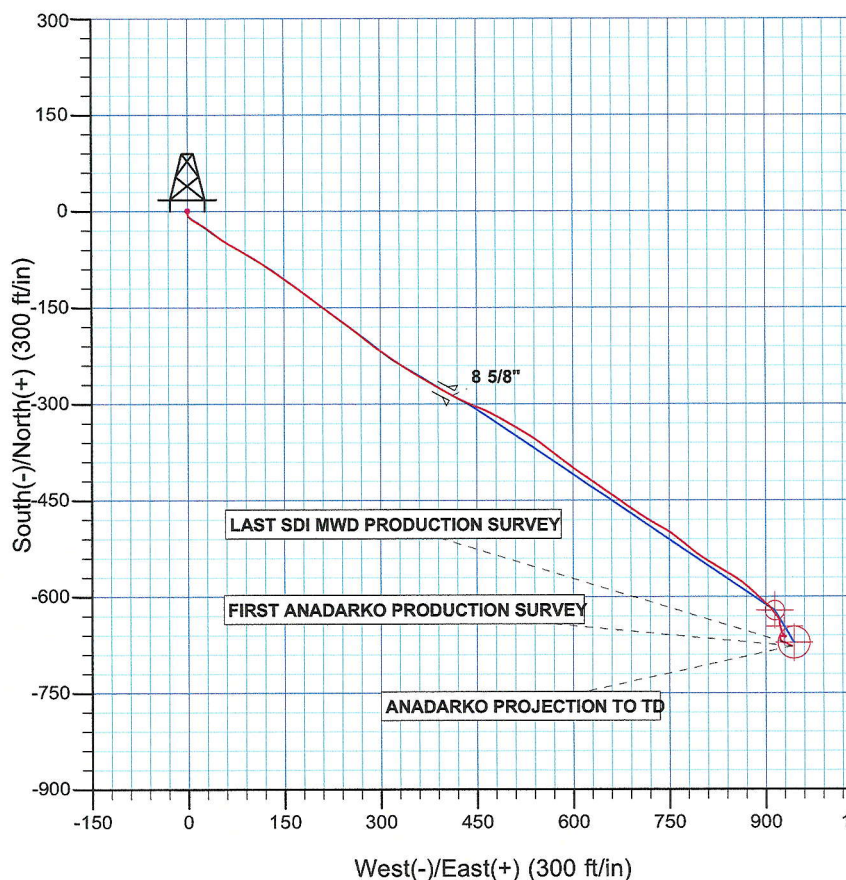
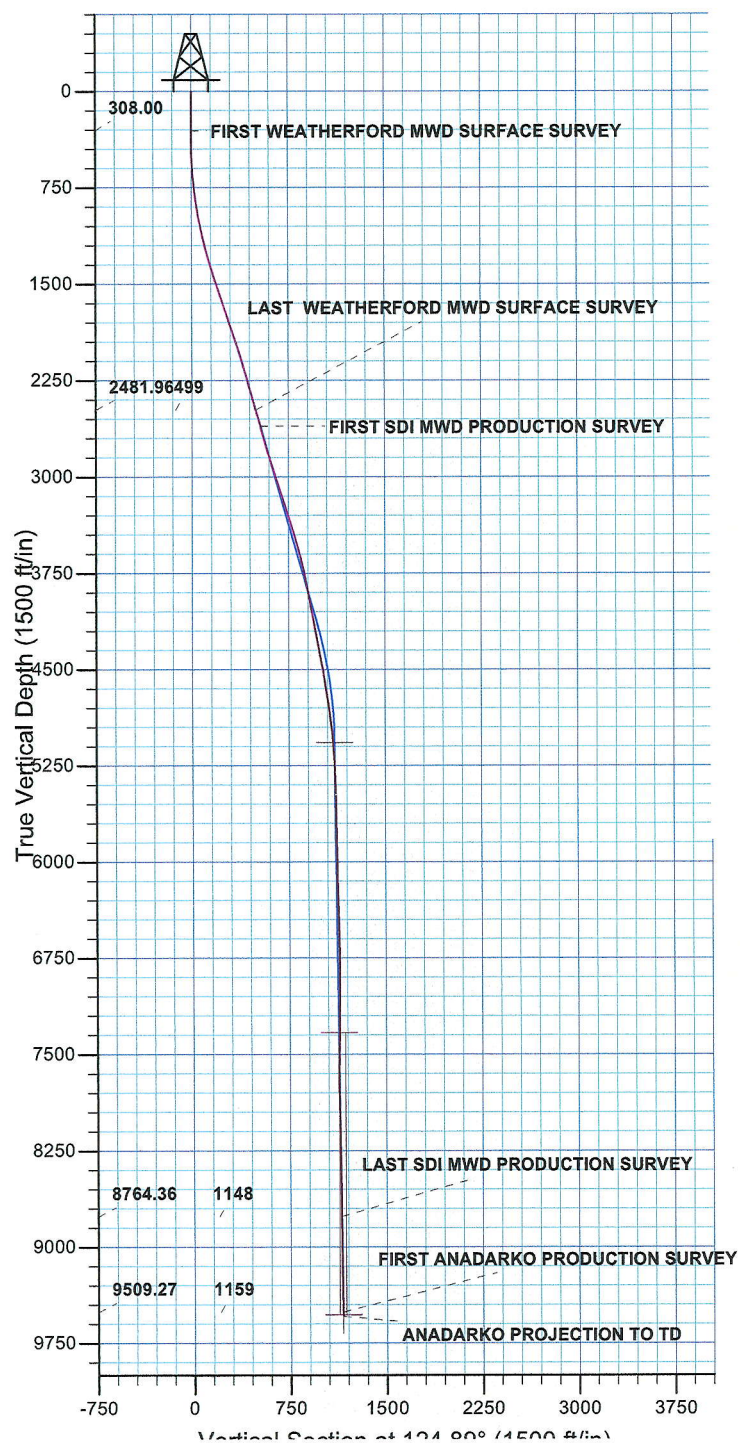
GL 4955' & RKB 25' @ 4980.00ft

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
0.00	0.00	14530654.85	2060621.93	40° 0' 10.609 N	109° 29' 58.362 W



Azimuths to True North  
Magnetic North: 11.13°

Magnetic Field  
Strength: 52374.6snT  
Dip Angle: 65.88°  
Date: 01/05/2011  
Model: IGRF2010



PROJECT DETAILS: Uintah County, UT UTM12

Geodetic System: Universal Transverse Mercator (US Survey Feet)  
Datum: NAD 1927 - Western US  
Ellipsoid: Clarke 1866  
Zone: Zone 12N (114 W to 108 W)  
Location: SEC 25 T9S R21E  
System Datum: Mean Sea Level

Design: OH (NBU 921-25O4BS/OH)

Created By: Robert Scott Date: 12/21 February 15 2014



**Scientific Drilling**  
Rocky Mountain Operations

# **Kerr McGee Oil and Gas Onshore LP**

Uintah County, UT UTM12  
NBU 921-25N Pad  
NBU 921-25O4BS

OH

Design: OH

## **Standard Survey Report**

15 February, 2011

**Company:** Kerr McGee Oil and Gas Onshore LP  
**Project:** Uintah County, UT UTM12  
**Site:** NBU 921-25N Pad  
**Well:** NBU 921-25O4BS  
**Wellbore:** OH  
**Design:** OH

**Local Co-ordinate Reference:** Well NBU 921-25O4BS  
**TVD Reference:** GL 4955' & RKB 25' @ 4980.00ft  
**MD Reference:** GL 4955' & RKB 25' @ 4980.00ft  
**North Reference:** True  
**Survey Calculation Method:** Minimum Curvature  
**Database:** EDM5000-RobertS-Local

<b>Project</b>	Uintah County, UT UTM12		
<b>Map System:</b>	Universal Transverse Mercator (US Survey Feet)	<b>System Datum:</b>	Mean Sea Level
<b>Geo Datum:</b>	NAD 1927 - Western US		
<b>Map Zone:</b>	Zone 12N (114 W to 108 W)		

Site	NBU 921-25N Pad, SEC 25 T9S R21E				
Site Position:		Northing:	14,530,655.41 usft	Latitude:	40° 0' 10.616 N
From:	Lat/Long	Easting:	2,060,612.11 usft	Longitude:	109° 29' 58.488 W
Position Uncertainty:	0.00 ft	Slot Radius:	13.200 in	Grid Convergence:	0.96 °

Well	NBU 921-25O4BS, 1156' FSL 2595' FWL					
Well Position	+N/-S	0.00 ft	Northing:	14,530,654.85 usft	Latitude:	40° 0' 10.609 N
	+E/-W	0.00 ft	Easting:	2,060,621.92 usft	Longitude:	109° 29' 58.362 W
Position Uncertainty		0.00 ft	Wellhead Elevation:	ft	Ground Level:	4,955.00 ft

<b>Wellbore</b>	OH					
<b>Magnetics</b>	<b>Model Name</b>	<b>Sample Date</b>	<b>Declination (°)</b>	<b>Dip Angle (°)</b>	<b>Field Strength (nT)</b>	
	IGRF2010	01/05/2011	11.13	65.88	52,375	

<b>Design</b>	OH					
<b>Audit Notes:</b>						
<b>Version:</b>	1.0	<b>Phase:</b>	ACTUAL	<b>Tie On Depth:</b>	0.00	
<b>Vertical Section:</b>	<b>Depth From (TVD) (ft)</b>	<b>+N/-S (ft)</b>	<b>+E/-W (ft)</b>	<b>Direction (°)</b>		
	0.00	0.00	0.00	124.89		

<b>Survey Program</b>	<b>Date</b> 02/15/2011				
<b>From (ft)</b>	<b>To (ft)</b>	<b>Survey (Wellbore)</b>	<b>Tool Name</b>	<b>Description</b>	
16.00	2,551.00	Survey #1 WEATHERFORD MWD SURFA	MWD	MWD - Standard	
2,680.00	8,909.00	Survey #2 SDI MWD PRODUCTION (OH)	MWD SDI	MWD - Standard ver 1.0.1	
9,654.00	9,685.00	Survey #3 ANADARKO PRODUCTION SU	MWD	MWD - Standard	

<b>Survey</b>									
<b>Measured Depth (ft)</b>	<b>Inclination (°)</b>	<b>Azimuth (°)</b>	<b>Vertical Depth (ft)</b>	<b>+N/-S (ft)</b>	<b>+E/-W (ft)</b>	<b>Vertical Section (ft)</b>	<b>Dogleg Rate (°/100ft)</b>	<b>Build Rate (°/100ft)</b>	<b>Turn Rate (°/100ft)</b>
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
16.00	0.00	0.00	16.00	0.00	0.00	0.00	0.00	0.00	0.00
308.00	0.50	76.29	308.00	0.30	1.24	0.84	0.17	0.17	0.00
<b>FIRST WEATHERFORD MWD SURFACE SURVEY</b>									
401.00	1.65	211.48	400.99	-0.74	0.93	1.19	2.19	1.24	145.37
497.00	2.69	180.16	496.92	-4.18	0.20	2.56	1.61	1.08	-32.63
592.00	3.88	138.91	591.77	-8.83	2.31	6.95	2.70	1.25	-43.42
688.00	5.06	124.91	687.48	-13.70	7.92	14.33	1.67	1.23	-14.58
782.00	6.75	120.04	780.98	-18.84	16.10	23.98	1.87	1.80	-5.18

**Company:** Kerr McGee Oil and Gas Onshore LP  
**Project:** Uintah County, UT UTM12  
**Site:** NBU 921-25N Pad  
**Well:** NBU 921-25O4BS  
**Wellbore:** OH  
**Design:** OH

**Local Co-ordinate Reference:** Well NBU 921-25O4BS  
**TVD Reference:** GL 4955' & RKB 25' @ 4980.00ft  
**MD Reference:** GL 4955' & RKB 25' @ 4980.00ft  
**North Reference:** True  
**Survey Calculation Method:** Minimum Curvature  
**Database:** EDM5000-RobertS-Local

**Survey**

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
878.00	8.38	123.29	876.14	-25.50	26.83	36.60	1.75	1.70	3.39
973.00	10.56	128.66	969.84	-34.74	39.42	52.21	2.47	2.29	5.65
1,067.00	11.94	122.91	1,062.04	-45.41	54.31	70.52	1.89	1.47	-6.12
1,162.00	13.56	119.79	1,154.69	-56.28	72.23	91.44	1.85	1.71	-3.28
1,257.00	15.00	120.29	1,246.76	-68.01	92.51	114.78	1.52	1.52	0.53
1,353.00	16.55	122.12	1,339.14	-81.55	114.82	140.83	1.70	1.61	1.91
1,448.00	16.38	125.29	1,430.24	-96.48	137.21	167.74	0.96	-0.18	3.34
1,542.00	17.94	125.41	1,520.06	-112.53	159.83	195.47	1.66	1.66	0.13
1,636.00	18.94	127.04	1,609.23	-130.11	183.81	225.19	1.20	1.06	1.73
1,731.00	18.50	126.79	1,699.20	-148.42	208.18	255.66	0.47	-0.46	-0.26
1,826.00	18.44	126.04	1,789.31	-166.29	232.40	285.75	0.26	-0.06	-0.79
1,921.00	19.19	126.66	1,879.23	-184.45	257.08	316.37	0.82	0.79	0.65
2,017.00	19.69	128.79	1,969.76	-204.00	282.34	348.28	0.90	0.52	2.22
2,112.00	16.94	125.91	2,059.94	-222.15	306.03	378.09	3.05	-2.89	-3.03
2,207.00	15.69	122.16	2,151.12	-237.11	328.11	404.76	1.72	-1.32	-3.95
2,301.00	15.06	120.79	2,241.75	-250.12	349.37	429.64	0.77	-0.67	-1.46
2,396.00	16.38	121.29	2,333.20	-263.40	371.42	455.32	1.40	1.39	0.53
2,491.00	16.44	120.04	2,424.33	-277.08	394.50	482.08	0.38	0.06	-1.32
2,551.00	15.89	118.76	2,481.96	-285.29	409.05	498.71	1.09	-0.92	-2.13
<b>LAST WEATHERFORD MWD SURFACE SURVEY</b>									
2,680.00	14.60	111.76	2,606.43	-299.81	439.64	532.11	1.74	-1.00	-5.43
<b>FIRST SDI MWD PRODUCTION SURVEY</b>									
2,774.00	16.18	114.66	2,697.05	-309.67	462.54	556.53	1.87	1.68	3.09
2,868.00	17.06	119.58	2,787.13	-321.94	486.44	583.15	1.76	0.94	5.23
2,963.00	17.67	120.81	2,877.80	-336.21	510.94	611.41	0.75	0.64	1.29
3,057.00	17.64	122.27	2,967.37	-351.12	535.24	639.87	0.47	-0.03	1.55
3,152.00	18.11	127.68	3,057.79	-367.83	559.10	669.00	1.82	0.49	5.69
3,246.00	19.01	127.61	3,146.90	-386.10	582.79	698.88	0.96	0.96	-0.07
3,341.00	17.59	125.73	3,237.10	-403.93	606.70	728.69	1.62	-1.49	-1.98
3,435.00	17.32	124.33	3,326.77	-420.11	629.78	756.89	0.53	-0.29	-1.49
3,529.00	16.27	124.50	3,416.76	-435.46	652.19	784.05	1.12	-1.12	0.18
3,624.00	16.18	126.08	3,507.97	-450.80	673.85	810.59	0.47	-0.09	1.66
3,718.00	14.86	124.24	3,598.55	-465.29	694.40	835.73	1.50	-1.40	-1.96
3,813.00	13.19	121.87	3,690.71	-477.87	713.68	858.74	1.86	-1.76	-2.49
3,907.00	11.52	119.49	3,782.53	-488.15	730.96	878.80	1.86	-1.78	-2.53
4,002.00	10.73	120.90	3,875.75	-497.37	746.81	897.06	0.88	-0.83	1.48
4,096.00	11.08	127.84	3,968.05	-507.40	761.45	914.81	1.44	0.37	7.38
4,190.00	11.08	129.07	4,060.30	-518.63	775.59	932.84	0.25	0.00	1.31
4,285.00	10.64	128.28	4,153.60	-529.82	789.57	950.70	0.49	-0.46	-0.83
4,379.00	10.38	124.33	4,246.02	-539.97	803.37	967.83	0.81	-0.28	-4.20
4,474.00	10.60	120.44	4,339.44	-549.23	817.97	985.10	0.78	0.23	-4.09
4,568.00	11.28	121.80	4,431.73	-558.45	833.24	1,002.90	0.77	0.72	1.45
4,663.00	10.02	120.72	4,525.09	-567.57	848.24	1,020.42	1.34	-1.33	-1.14
4,757.00	9.58	125.64	4,617.72	-576.31	861.63	1,036.40	1.01	-0.47	5.23



**Company:** Kerr McGee Oil and Gas Onshore LP  
**Project:** Uintah County, UT UTM12  
**Site:** NBU 921-25N Pad  
**Well:** NBU 921-25O4BS  
**Wellbore:** OH  
**Design:** OH

**Local Co-ordinate Reference:** Well NBU 921-25O4BS  
**TVD Reference:** GL 4955' & RKB 25' @ 4980.00ft  
**MD Reference:** GL 4955' & RKB 25' @ 4980.00ft  
**North Reference:** True  
**Survey Calculation Method:** Minimum Curvature  
**Database:** EDM5000-RobertS-Local

**Survey**

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
4,851.00	8.44	132.32	4,710.56	-585.51	873.09	1,051.06	1.64	-1.21	7.11
4,946.00	7.83	132.94	4,804.60	-594.61	882.98	1,064.38	0.65	-0.64	0.65
5,040.00	7.47	132.68	4,897.77	-603.11	892.16	1,076.78	0.38	-0.38	-0.28
5,134.00	6.86	132.76	4,991.03	-611.07	900.77	1,088.39	0.65	-0.65	0.09
5,229.00	4.83	137.69	5,085.53	-617.88	907.63	1,097.91	2.20	-2.14	5.19
5,323.00	3.17	144.98	5,179.30	-622.93	911.79	1,104.22	1.84	-1.77	7.76
5,418.00	3.34	142.87	5,274.15	-627.29	914.97	1,109.31	0.22	0.18	-2.22
5,512.00	1.05	135.64	5,368.07	-630.09	917.22	1,112.77	2.45	-2.44	-7.69
5,606.00	1.23	148.85	5,462.06	-631.57	918.35	1,114.53	0.34	0.19	14.05
5,701.00	1.23	146.30	5,557.03	-633.29	919.44	1,116.41	0.06	0.00	-2.68
5,795.00	1.32	147.88	5,651.01	-635.05	920.57	1,118.35	0.10	0.10	1.68
5,889.00	1.49	171.61	5,744.98	-637.17	921.33	1,120.19	0.64	0.18	25.24
5,984.00	1.16	180.84	5,839.96	-639.36	921.49	1,121.57	0.41	-0.35	9.72
6,078.00	1.32	176.80	5,933.94	-641.39	921.54	1,122.77	0.19	0.17	-4.30
6,173.00	1.32	170.29	6,028.91	-643.56	921.79	1,124.21	0.16	0.00	-6.85
6,267.00	1.85	169.01	6,122.87	-646.12	922.26	1,126.06	0.57	0.56	-1.36
6,362.00	1.93	160.54	6,217.82	-649.13	923.08	1,128.47	0.31	0.08	-8.92
6,456.00	2.11	166.60	6,311.76	-652.31	924.01	1,131.04	0.30	0.19	6.45
6,550.00	1.85	163.09	6,405.71	-655.44	924.85	1,133.53	0.31	-0.28	-3.73
6,645.00	2.20	160.62	6,500.65	-658.63	925.91	1,136.21	0.38	0.37	-2.60
6,739.00	1.06	95.06	6,594.62	-660.41	927.37	1,138.43	2.14	-1.21	-69.74
6,833.00	1.06	113.78	6,688.60	-660.84	929.03	1,140.04	0.37	0.00	19.91
6,927.00	0.79	136.81	6,782.59	-661.66	930.27	1,141.53	0.48	-0.29	24.50
7,022.00	0.97	125.21	6,877.58	-662.60	931.38	1,142.97	0.27	0.19	-12.21
7,116.00	1.06	282.97	6,971.57	-662.86	931.18	1,142.96	2.12	0.10	167.83
7,211.00	1.41	279.89	7,066.55	-662.46	929.17	1,141.09	0.37	0.37	-3.24
7,305.00	1.06	287.89	7,160.53	-662.00	927.20	1,139.21	0.41	-0.37	8.51
7,399.00	1.06	225.15	7,254.51	-662.35	925.76	1,138.22	1.17	0.00	-66.74
7,494.00	0.62	330.00	7,349.51	-662.52	924.88	1,137.60	1.43	-0.46	110.37
7,588.00	0.62	303.97	7,443.50	-661.80	924.20	1,136.63	0.30	0.00	-27.69
7,682.00	0.50	257.72	7,537.50	-661.60	923.38	1,135.84	0.48	-0.13	-49.20
7,776.00	0.44	222.41	7,631.50	-661.95	922.74	1,135.52	0.31	-0.06	-37.56
7,871.00	0.70	213.54	7,726.49	-662.71	922.17	1,135.48	0.29	0.27	-9.34
7,965.00	0.70	180.40	7,820.48	-663.76	921.85	1,135.82	0.42	0.00	-35.26
8,059.00	0.70	171.52	7,914.48	-664.90	921.93	1,136.54	0.12	0.00	-9.45
8,154.00	1.41	167.92	8,009.46	-666.62	922.26	1,137.79	0.75	0.75	-3.79
8,248.00	1.38	133.59	8,103.43	-668.53	923.32	1,139.76	0.88	-0.03	-36.52
8,343.00	1.76	133.29	8,198.40	-670.32	925.21	1,142.33	0.40	0.40	-0.32
8,437.00	0.53	105.25	8,292.38	-671.42	926.68	1,144.17	1.40	-1.31	-29.83
8,531.00	0.70	80.82	8,386.37	-671.44	927.67	1,144.99	0.33	0.18	-25.99
8,625.00	0.44	98.13	8,480.37	-671.40	928.59	1,145.73	0.33	-0.28	18.41
8,720.00	0.30	92.14	8,575.37	-671.46	929.20	1,146.26	0.15	-0.15	-6.31
8,814.00	0.35	146.83	8,669.37	-671.71	929.61	1,146.73	0.32	0.05	58.18

**Company:** Kerr McGee Oil and Gas Onshore LP  
**Project:** Uintah County, UT UTM12  
**Site:** NBU 921-25N Pad  
**Well:** NBU 921-25O4BS  
**Wellbore:** OH  
**Design:** OH

**Local Co-ordinate Reference:** Well NBU 921-25O4BS  
**TVD Reference:** GL 4955' & RKB 25' @ 4980.00ft  
**MD Reference:** GL 4955' & RKB 25' @ 4980.00ft  
**North Reference:** True  
**Survey Calculation Method:** Minimum Curvature  
**Database:** EDM5000-RobertS-Local

**Survey**

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
8,909.00	0.88	116.77	8,764.36	-672.29	930.42	1,147.73	0.63	0.56	-31.64
<b>LAST SDI MWD PRODUCTION SURVEY</b>									
9,654.00	0.88	116.77	9,509.27	-677.44	940.63	1,159.05	0.00	0.00	0.00
<b>FIRST ANADARKO PRODUCTION SURVEY</b>									
9,685.00	0.88	116.77	9,540.27	-677.65	941.06	1,159.52	0.00	0.00	0.00
<b>ANADARKO PROJECTION TO TD</b>									

**Design Annotations**

Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment
		+N/-S (ft)	+E/-W (ft)	
308.00	308.00	0.30	1.24	FIRST WEATHERFORD MWD SURFACE SURVEY
2,551.00	2,481.96	-285.29	409.05	LAST WEATHERFORD MWD SURFACE SURVEY
2,680.00	2,606.43	-299.81	439.64	FIRST SDI MWD PRODUCTION SURVEY
8,909.00	8,764.36	-672.29	930.42	LAST SDI MWD PRODUCTION SURVEY
9,654.00	9,509.27	-677.44	940.63	FIRST ANADARKO PRODUCTION SURVEY
9,685.00	9,540.27	-677.65	941.06	ANADARKO PROJECTION TO TD

Checked By: \_\_\_\_\_ Approved By: \_\_\_\_\_ Date: \_\_\_\_\_



**Scientific Drilling**  
Rocky Mountain Operations

# **Kerr McGee Oil and Gas Onshore LP**

Uintah County, UT UTM12  
NBU 921-25N Pad  
NBU 921-25O4BS

OH

Design: OH

## **Survey Report - Geographic**

15 February, 2011

<b>Company:</b>	Kerr McGee Oil and Gas Onshore LP	<b>Local Co-ordinate Reference:</b>	Well NBU 921-25O4BS
<b>Project:</b>	Uintah County, UT UTM12	<b>TVD Reference:</b>	GL 4955' & RKB 25' @ 4980.00ft
<b>Site:</b>	NBU 921-25N Pad	<b>MD Reference:</b>	GL 4955' & RKB 25' @ 4980.00ft
<b>Well:</b>	NBU 921-25O4BS	<b>North Reference:</b>	True
<b>Wellbore:</b>	OH	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	OH	<b>Database:</b>	EDM5000-RobertS-Local

<b>Project</b>	Uintah County, UT UTM12		
<b>Map System:</b>	Universal Transverse Mercator (US Survey Feet)	<b>System Datum:</b>	Mean Sea Level
<b>Geo Datum:</b>	NAD 1927 - Western US		
<b>Map Zone:</b>	Zone 12N (114 W to 108 W)		

<b>Site</b>	NBU 921-25N Pad, SEC 25 T9S R21E				
<b>Site Position:</b>		<b>Northing:</b>	14,530,655.41 usft	<b>Latitude:</b>	40° 0' 10.616 N
<b>From:</b>	Lat/Long	<b>Easting:</b>	2,060,612.11 usft	<b>Longitude:</b>	109° 29' 58.488 W
<b>Position Uncertainty:</b>	0.00 ft	<b>Slot Radius:</b>	13.200 in	<b>Grid Convergence:</b>	0.96 °

<b>Well</b>	NBU 921-25O4BS, 1156' FSL 2595' FWL					
<b>Well Position</b>	<b>+N/-S</b>	0.00 ft	<b>Northing:</b>	14,530,654.85 usft	<b>Latitude:</b>	40° 0' 10.609 N
	<b>+E/-W</b>	0.00 ft	<b>Easting:</b>	2,060,621.92 usft	<b>Longitude:</b>	109° 29' 58.362 W
<b>Position Uncertainty</b>		0.00 ft	<b>Wellhead Elevation:</b>	ft	<b>Ground Level:</b>	4,955.00 ft

<b>Wellbore</b>	OH				
<b>Magnetics</b>	<b>Model Name</b>	<b>Sample Date</b>	<b>Declination (°)</b>	<b>Dip Angle (°)</b>	<b>Field Strength (nT)</b>
	IGRF2010	01/05/2011	11.13	65.88	52,375

<b>Design</b>	OH				
<b>Audit Notes:</b>					
<b>Version:</b>	1.0	<b>Phase:</b>	ACTUAL	<b>Tie On Depth:</b>	0.00
<b>Vertical Section:</b>	<b>Depth From (TVD) (ft)</b>	<b>+N/-S (ft)</b>	<b>+E/-W (ft)</b>	<b>Direction (°)</b>	
	0.00	0.00	0.00	124.89	

<b>Survey Program</b>	Date 02/15/2011				
<b>From (ft)</b>	<b>To (ft)</b>	<b>Survey (Wellbore)</b>	<b>Tool Name</b>	<b>Description</b>	
16.00	2,551.00	Survey #1 WEATHERFORD MWD SURFA	MWD	MWD - Standard	
2,680.00	8,909.00	Survey #2 SDI MWD PRODUCTION (OH)	MWD SDI	MWD - Standard ver 1.0.1	
9,654.00	9,685.00	Survey #3 ANADARKO PRODUCTION SU	MWD	MWD - Standard	

<b>Survey</b>									
<b>Measured Depth (ft)</b>	<b>Inclination (°)</b>	<b>Azimuth (°)</b>	<b>Vertical Depth (ft)</b>	<b>+N/-S (ft)</b>	<b>+E/-W (ft)</b>	<b>Map Northing (usft)</b>	<b>Map Easting (usft)</b>	<b>Latitude</b>	<b>Longitude</b>
0.00	0.00	0.00	0.00	0.00	0.00	14,530,654.85	2,060,621.92	40° 0' 10.609 N	109° 29' 58.362 W
16.00	0.00	0.00	16.00	0.00	0.00	14,530,654.85	2,060,621.92	40° 0' 10.609 N	109° 29' 58.362 W
308.00	0.50	76.29	308.00	0.30	1.24	14,530,655.17	2,060,623.16	40° 0' 10.612 N	109° 29' 58.346 W
<b>FIRST WEATHERFORD MWD SURFACE SURVEY</b>									
401.00	1.65	211.48	400.99	-0.74	0.93	14,530,654.12	2,060,622.87	40° 0' 10.602 N	109° 29' 58.350 W
497.00	2.69	180.16	496.92	-4.18	0.20	14,530,650.68	2,060,622.20	40° 0' 10.568 N	109° 29' 58.359 W
592.00	3.88	138.91	591.77	-8.83	2.31	14,530,646.06	2,060,624.38	40° 0' 10.522 N	109° 29' 58.332 W
688.00	5.06	124.91	687.48	-13.70	7.92	14,530,641.29	2,060,630.07	40° 0' 10.474 N	109° 29' 58.260 W
782.00	6.75	120.04	780.98	-18.84	16.10	14,530,636.29	2,060,638.34	40° 0' 10.423 N	109° 29' 58.155 W
878.00	8.38	123.29	876.14	-25.50	26.83	14,530,629.80	2,060,649.18	40° 0' 10.357 N	109° 29' 58.017 W

**Company:** Kerr McGee Oil and Gas Onshore LP  
**Project:** Uintah County, UT UTM12  
**Site:** NBU 921-25N Pad  
**Well:** NBU 921-25O4BS  
**Wellbore:** OH  
**Design:** OH

**Local Co-ordinate Reference:** Well NBU 921-25O4BS  
**TVD Reference:** GL 4955' & RKB 25' @ 4980.00ft  
**MD Reference:** GL 4955' & RKB 25' @ 4980.00ft  
**North Reference:** True  
**Survey Calculation Method:** Minimum Curvature  
**Database:** EDM5000-RobertS-Local

**Survey**

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
973.00	10.56	128.66	969.84	-34.74	39.42	14,530,620.78	2,060,661.92	40° 0' 10.266 N	109° 29' 57.855 W
1,067.00	11.94	122.91	1,062.04	-45.41	54.31	14,530,610.37	2,060,676.99	40° 0' 10.160 N	109° 29' 57.664 W
1,162.00	13.56	119.79	1,154.69	-56.28	72.23	14,530,599.80	2,060,695.09	40° 0' 10.053 N	109° 29' 57.434 W
1,257.00	15.00	120.29	1,246.76	-68.01	92.51	14,530,588.40	2,060,715.56	40° 0' 9.937 N	109° 29' 57.173 W
1,353.00	16.55	122.12	1,339.14	-81.55	114.82	14,530,575.25	2,060,738.10	40° 0' 9.803 N	109° 29' 56.886 W
1,448.00	16.38	125.29	1,430.24	-96.48	137.21	14,530,560.69	2,060,760.74	40° 0' 9.656 N	109° 29' 56.599 W
1,542.00	17.94	125.41	1,520.06	-112.53	159.83	14,530,545.03	2,060,783.63	40° 0' 9.497 N	109° 29' 56.308 W
1,636.00	18.94	127.04	1,609.23	-130.11	183.81	14,530,527.86	2,060,807.89	40° 0' 9.323 N	109° 29' 56.000 W
1,731.00	18.50	126.79	1,699.20	-148.42	208.18	14,530,509.96	2,060,832.58	40° 0' 9.142 N	109° 29' 55.686 W
1,826.00	18.44	126.04	1,789.31	-166.29	232.40	14,530,492.50	2,060,857.09	40° 0' 8.966 N	109° 29' 55.375 W
1,921.00	19.19	126.66	1,879.23	-184.45	257.08	14,530,474.76	2,060,882.07	40° 0' 8.786 N	109° 29' 55.058 W
2,017.00	19.69	128.79	1,969.76	-204.00	282.34	14,530,455.63	2,060,907.66	40° 0' 8.593 N	109° 29' 54.733 W
2,112.00	16.94	125.91	2,059.94	-222.15	306.03	14,530,437.89	2,060,931.65	40° 0' 8.413 N	109° 29' 54.429 W
2,207.00	15.69	122.16	2,151.12	-237.11	328.11	14,530,423.30	2,060,953.98	40° 0' 8.266 N	109° 29' 54.145 W
2,301.00	15.06	120.79	2,241.75	-250.12	349.37	14,530,410.65	2,060,975.45	40° 0' 8.137 N	109° 29' 53.872 W
2,396.00	16.38	121.29	2,333.20	-263.40	371.42	14,530,397.74	2,060,997.72	40° 0' 8.006 N	109° 29' 53.588 W
2,491.00	16.44	120.04	2,424.33	-277.08	394.50	14,530,384.45	2,061,021.03	40° 0' 7.870 N	109° 29' 53.292 W
2,551.00	15.89	118.76	2,481.96	-285.29	409.05	14,530,376.49	2,061,035.72	40° 0' 7.789 N	109° 29' 53.105 W
<b>LAST WEATHERFORD MWD SURFACE SURVEY</b>									
2,680.00	14.60	111.76	2,606.43	-299.81	439.64	14,530,362.48	2,061,066.54	40° 0' 7.646 N	109° 29' 52.712 W
<b>FIRST SDI MWD PRODUCTION SURVEY</b>									
2,774.00	16.18	114.66	2,697.05	-309.67	462.54	14,530,353.01	2,061,089.61	40° 0' 7.548 N	109° 29' 52.417 W
2,868.00	17.06	119.58	2,787.13	-321.94	486.44	14,530,341.15	2,061,113.71	40° 0' 7.427 N	109° 29' 52.110 W
2,963.00	17.67	120.81	2,877.80	-336.21	510.94	14,530,327.30	2,061,138.45	40° 0' 7.286 N	109° 29' 51.795 W
3,057.00	17.64	122.27	2,967.37	-351.12	535.24	14,530,312.80	2,061,163.00	40° 0' 7.139 N	109° 29' 51.483 W
3,152.00	18.11	127.68	3,057.79	-367.83	559.10	14,530,296.49	2,061,187.13	40° 0' 6.973 N	109° 29' 51.176 W
3,246.00	19.01	127.61	3,146.90	-386.10	582.79	14,530,278.62	2,061,211.13	40° 0' 6.793 N	109° 29' 50.872 W
3,341.00	17.59	125.73	3,237.10	-403.93	606.70	14,530,261.20	2,061,235.34	40° 0' 6.617 N	109° 29' 50.565 W
3,435.00	17.32	124.33	3,326.77	-420.11	629.78	14,530,245.40	2,061,258.69	40° 0' 6.457 N	109° 29' 50.268 W
3,529.00	16.27	124.50	3,416.76	-435.46	652.19	14,530,230.43	2,061,281.35	40° 0' 6.305 N	109° 29' 49.980 W
3,624.00	16.18	126.08	3,507.97	-450.80	673.85	14,530,215.46	2,061,303.27	40° 0' 6.153 N	109° 29' 49.702 W
3,718.00	14.86	124.24	3,598.55	-465.29	694.40	14,530,201.32	2,061,324.06	40° 0' 6.010 N	109° 29' 49.437 W
3,813.00	13.19	121.87	3,690.71	-477.87	713.68	14,530,189.07	2,061,343.55	40° 0' 5.886 N	109° 29' 49.190 W
3,907.00	11.52	119.49	3,782.53	-488.15	730.96	14,530,179.07	2,061,361.00	40° 0' 5.784 N	109° 29' 48.968 W
4,002.00	10.73	120.90	3,875.75	-497.37	746.81	14,530,170.13	2,061,377.00	40° 0' 5.693 N	109° 29' 48.764 W
4,096.00	11.08	127.84	3,968.05	-507.40	761.45	14,530,160.34	2,061,391.81	40° 0' 5.594 N	109° 29' 48.576 W
4,190.00	11.08	129.07	4,060.30	-518.63	775.59	14,530,149.35	2,061,406.14	40° 0' 5.483 N	109° 29' 48.394 W
4,285.00	10.64	128.28	4,153.60	-529.82	789.57	14,530,138.40	2,061,420.30	40° 0' 5.372 N	109° 29' 48.214 W
4,379.00	10.38	124.33	4,246.02	-539.97	803.37	14,530,128.48	2,061,434.27	40° 0' 5.272 N	109° 29' 48.037 W
4,474.00	10.60	120.44	4,339.44	-549.23	817.97	14,530,119.47	2,061,449.03	40° 0' 5.180 N	109° 29' 47.849 W
4,568.00	11.28	121.80	4,431.73	-558.45	833.24	14,530,110.51	2,061,464.45	40° 0' 5.089 N	109° 29' 47.653 W
4,663.00	10.02	120.72	4,525.09	-567.57	848.24	14,530,101.64	2,061,479.60	40° 0' 4.999 N	109° 29' 47.460 W
4,757.00	9.58	125.64	4,617.72	-576.31	861.63	14,530,093.14	2,061,493.13	40° 0' 4.913 N	109° 29' 47.288 W
4,851.00	8.44	132.32	4,710.56	-585.51	873.09	14,530,084.13	2,061,504.75	40° 0' 4.822 N	109° 29' 47.141 W
4,946.00	7.83	132.94	4,804.60	-594.61	882.98	14,530,075.19	2,061,514.79	40° 0' 4.732 N	109° 29' 47.014 W
5,040.00	7.47	132.68	4,897.77	-603.11	892.16	14,530,066.84	2,061,524.11	40° 0' 4.648 N	109° 29' 46.896 W
5,134.00	6.86	132.76	4,991.03	-611.07	900.77	14,530,059.04	2,061,532.86	40° 0' 4.569 N	109° 29' 46.785 W
5,229.00	4.83	137.69	5,085.53	-617.88	907.63	14,530,052.34	2,061,539.83	40° 0' 4.502 N	109° 29' 46.697 W
5,323.00	3.17	144.98	5,179.30	-622.93	911.79	14,530,047.36	2,061,544.07	40° 0' 4.452 N	109° 29' 46.644 W
5,418.00	3.34	142.87	5,274.15	-627.29	914.97	14,530,043.05	2,061,547.32	40° 0' 4.409 N	109° 29' 46.603 W
5,512.00	1.05	135.64	5,368.07	-630.09	917.22	14,530,040.29	2,061,549.62	40° 0' 4.381 N	109° 29' 46.574 W
5,606.00	1.23	148.85	5,462.06	-631.57	918.35	14,530,038.83	2,061,550.77	40° 0' 4.366 N	109° 29' 46.559 W
5,701.00	1.23	146.30	5,557.03	-633.29	919.44	14,530,037.13	2,061,551.89	40° 0' 4.349 N	109° 29' 46.545 W
5,795.00	1.32	147.88	5,651.01	-635.05	920.57	14,530,035.39	2,061,553.06	40° 0' 4.332 N	109° 29' 46.531 W
5,889.00	1.49	171.61	5,744.98	-637.17	921.33	14,530,033.28	2,061,553.85	40° 0' 4.311 N	109° 29' 46.521 W

**Company:** Kerr McGee Oil and Gas Onshore LP  
**Project:** Uintah County, UT UTM12  
**Site:** NBU 921-25N Pad  
**Well:** NBU 921-25O4BS  
**Wellbore:** OH  
**Design:** OH

**Local Co-ordinate Reference:** Well NBU 921-25O4BS  
**TVD Reference:** GL 4955' & RKB 25' @ 4980.00ft  
**MD Reference:** GL 4955' & RKB 25' @ 4980.00ft  
**North Reference:** True  
**Survey Calculation Method:** Minimum Curvature  
**Database:** EDM5000-RobertS-Local


**Survey**

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
5,984.00	1.16	180.84	5,839.96	-639.36	921.49	14,530,031.10	2,061,554.05	40° 0' 4.289 N	109° 29' 46.519 W
6,078.00	1.32	176.80	5,933.94	-641.39	921.54	14,530,029.07	2,061,554.13	40° 0' 4.269 N	109° 29' 46.518 W
6,173.00	1.32	170.29	6,028.91	-643.56	921.79	14,530,026.90	2,061,554.41	40° 0' 4.248 N	109° 29' 46.515 W
6,267.00	1.85	169.01	6,122.87	-646.12	922.26	14,530,024.35	2,061,554.93	40° 0' 4.223 N	109° 29' 46.509 W
6,362.00	1.93	160.54	6,217.82	-649.13	923.08	14,530,021.35	2,061,555.80	40° 0' 4.193 N	109° 29' 46.498 W
6,456.00	2.11	166.60	6,311.76	-652.31	924.01	14,530,018.20	2,061,556.79	40° 0' 4.161 N	109° 29' 46.487 W
6,550.00	1.85	163.09	6,405.71	-655.44	924.85	14,530,015.07	2,061,557.68	40° 0' 4.130 N	109° 29' 46.476 W
6,645.00	2.20	160.62	6,500.65	-658.63	925.91	14,530,011.91	2,061,558.79	40° 0' 4.099 N	109° 29' 46.462 W
6,739.00	1.06	95.06	6,594.62	-660.41	927.37	14,530,010.15	2,061,560.28	40° 0' 4.081 N	109° 29' 46.443 W
6,833.00	1.06	113.78	6,688.60	-660.84	929.03	14,530,009.75	2,061,561.95	40° 0' 4.077 N	109° 29' 46.422 W
6,927.00	0.79	136.81	6,782.59	-661.66	930.27	14,530,008.95	2,061,563.20	40° 0' 4.069 N	109° 29' 46.406 W
7,022.00	0.97	125.21	6,877.58	-662.60	931.38	14,530,008.03	2,061,564.32	40° 0' 4.060 N	109° 29' 46.392 W
7,116.00	1.06	282.97	6,971.57	-662.86	931.18	14,530,007.76	2,061,564.13	40° 0' 4.057 N	109° 29' 46.394 W
7,211.00	1.41	279.89	7,066.55	-662.46	929.17	14,530,008.13	2,061,562.12	40° 0' 4.061 N	109° 29' 46.420 W
7,305.00	1.06	287.89	7,160.53	-662.00	927.20	14,530,008.56	2,061,560.14	40° 0' 4.066 N	109° 29' 46.446 W
7,399.00	1.06	225.15	7,254.51	-662.35	925.76	14,530,008.19	2,061,558.70	40° 0' 4.062 N	109° 29' 46.464 W
7,494.00	0.62	330.00	7,349.51	-662.52	924.88	14,530,008.00	2,061,557.83	40° 0' 4.060 N	109° 29' 46.475 W
7,588.00	0.62	303.97	7,443.50	-661.80	924.20	14,530,008.71	2,061,557.14	40° 0' 4.068 N	109° 29' 46.484 W
7,682.00	0.50	257.72	7,537.50	-661.60	923.38	14,530,008.89	2,061,556.31	40° 0' 4.070 N	109° 29' 46.495 W
7,776.00	0.44	222.41	7,631.50	-661.95	922.74	14,530,008.53	2,061,555.67	40° 0' 4.066 N	109° 29' 46.503 W
7,871.00	0.70	213.54	7,726.49	-662.71	922.17	14,530,007.77	2,061,555.12	40° 0' 4.059 N	109° 29' 46.510 W
7,965.00	0.70	180.40	7,820.48	-663.76	921.85	14,530,006.71	2,061,554.82	40° 0' 4.048 N	109° 29' 46.514 W
8,059.00	0.70	171.52	7,914.48	-664.90	921.93	14,530,005.57	2,061,554.92	40° 0' 4.037 N	109° 29' 46.513 W
8,154.00	1.41	167.92	8,009.46	-666.62	922.26	14,530,003.86	2,061,555.28	40° 0' 4.020 N	109° 29' 46.509 W
8,248.00	1.38	133.59	8,103.43	-668.53	923.32	14,530,001.96	2,061,556.37	40° 0' 4.001 N	109° 29' 46.495 W
8,343.00	1.76	133.29	8,198.40	-670.32	925.21	14,530,000.21	2,061,558.29	40° 0' 3.983 N	109° 29' 46.471 W
8,437.00	0.53	105.25	8,292.38	-671.42	926.68	14,529,999.13	2,061,559.78	40° 0' 3.972 N	109° 29' 46.452 W
8,531.00	0.70	80.82	8,386.37	-671.44	927.67	14,529,999.12	2,061,560.77	40° 0' 3.972 N	109° 29' 46.440 W
8,625.00	0.44	98.13	8,480.37	-671.40	928.59	14,529,999.18	2,061,561.69	40° 0' 3.973 N	109° 29' 46.428 W
8,720.00	0.30	92.14	8,575.37	-671.46	929.20	14,529,999.13	2,061,562.30	40° 0' 3.972 N	109° 29' 46.420 W
8,814.00	0.35	146.83	8,669.37	-671.71	929.61	14,529,998.88	2,061,562.71	40° 0' 3.970 N	109° 29' 46.415 W
8,909.00	0.88	116.77	8,764.36	-672.29	930.42	14,529,998.33	2,061,563.53	40° 0' 3.964 N	109° 29' 46.404 W
<b>LAST SDI MWD PRODUCTION SURVEY</b>									
9,654.00	0.88	116.77	9,509.27	-677.44	940.63	14,529,993.35	2,061,573.83	40° 0' 3.913 N	109° 29' 46.273 W
<b>FIRST ANADARKO PRODUCTION SURVEY</b>									
9,685.00	0.88	116.77	9,540.27	-677.65	941.06	14,529,993.14	2,061,574.26	40° 0' 3.911 N	109° 29' 46.267 W
<b>ANADARKO PROJECTION TO TD</b>									

**Design Annotations**

Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment
		+N/-S (ft)	+E/-W (ft)	
308.00	308.00	0.30	1.24	FIRST WEATHERFORD MWD SURFACE SURVEY
2,551.00	2,481.96	-285.29	409.05	LAST WEATHERFORD MWD SURFACE SURVEY
2,680.00	2,606.43	-299.81	439.64	FIRST SDI MWD PRODUCTION SURVEY
8,909.00	8,764.36	-672.29	930.42	LAST SDI MWD PRODUCTION SURVEY

Checked By: \_\_\_\_\_ Approved By: \_\_\_\_\_ Date: \_\_\_\_\_

<b>STATE OF UTAH</b> DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS, AND MINING		<b>FORM 9</b>
<b>SUNDRY NOTICES AND REPORTS ON WELLS</b>  Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.		<b>5. LEASE DESIGNATION AND SERIAL NUMBER:</b> UO 4139 ST
<b>1. TYPE OF WELL</b> Gas Well		<b>6. IF INDIAN, ALLOTTEE OR TRIBE NAME:</b>
<b>2. NAME OF OPERATOR:</b> KERR-MCGEE OIL & GAS ONSHORE, L.P.		<b>7. UNIT or CA AGREEMENT NAME:</b> NATURAL BUTTES
<b>3. ADDRESS OF OPERATOR:</b> P.O. Box 173779 1099 18th Street, Suite 600, Denver, CO, 80217 3779		<b>8. WELL NAME and NUMBER:</b> NBU 921-25O4BS
<b>4. LOCATION OF WELL</b> <b>FOOTAGES AT SURFACE:</b> 1156 FSL 2595 FWL <b>QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN:</b> Qtr/Qtr: SESW Section: 25 Township: 09.0S Range: 21.0E Meridian: S		<b>9. API NUMBER:</b> 43047512640000
<b>5. FIELD and POOL or WILDCAT:</b> NATURAL BUTTES		<b>9. FIELD and POOL or WILDCAT:</b> NATURAL BUTTES
<b>COUNTY:</b> UINTAH		<b>STATE:</b> UTAH
11. CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA		
<b>TYPE OF SUBMISSION</b>	<b>TYPE OF ACTION</b>	
<input checked="" type="checkbox"/> <b>NOTICE OF INTENT</b> Approximate date work will start: <b>5/13/2013</b>  <input type="checkbox"/> <b>SUBSEQUENT REPORT</b> Date of Work Completion:  <input type="checkbox"/> <b>SPUD REPORT</b> Date of Spud:  <input type="checkbox"/> <b>DRILLING REPORT</b> Report Date:	<div style="display: flex; flex-wrap: wrap;"> <div style="width: 33%;"> <input type="checkbox"/> ACIDIZE  <input type="checkbox"/> CHANGE TO PREVIOUS PLANS  <input type="checkbox"/> CHANGE WELL STATUS  <input type="checkbox"/> DEEPEN  <input type="checkbox"/> OPERATOR CHANGE  <input type="checkbox"/> PRODUCTION START OR RESUME  <input type="checkbox"/> REPERFORATE CURRENT FORMATION  <input type="checkbox"/> TUBING REPAIR  <input type="checkbox"/> WATER SHUTOFF  <input type="checkbox"/> WILDCAT WELL DETERMINATION         </div> <div style="width: 33%;"> <input type="checkbox"/> ALTER CASING  <input type="checkbox"/> CHANGE TUBING  <input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS  <input type="checkbox"/> FRACTURE TREAT  <input type="checkbox"/> PLUG AND ABANDON  <input type="checkbox"/> RECLAMATION OF WELL SITE  <input type="checkbox"/> SIDETRACK TO REPAIR WELL  <input type="checkbox"/> VENT OR FLARE  <input type="checkbox"/> SI TA STATUS EXTENSION  <input type="checkbox"/> OTHER         </div> <div style="width: 33%;"> <input type="checkbox"/> CASING REPAIR  <input type="checkbox"/> CHANGE WELL NAME  <input type="checkbox"/> CONVERT WELL TYPE  <input type="checkbox"/> NEW CONSTRUCTION  <input type="checkbox"/> PLUG BACK  <input checked="" type="checkbox"/> RECOMPLETE DIFFERENT FORMATION  <input type="checkbox"/> TEMPORARY ABANDON  <input type="checkbox"/> WATER DISPOSAL  <input type="checkbox"/> APD EXTENSION          OTHER: <input style="width: 100%;" type="text"/> </div> </div>	
12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc. The operator requests authorization to recomplete the subject well in the WASATCH formation. Please see the attached procedure.		
<b>Approved by the Utah Division of Oil, Gas and Mining</b>  <b>Date:</b> May 22, 2013 <b>By:</b> 		
<b>NAME (PLEASE PRINT)</b> Teena Paulo		<b>PHONE NUMBER</b> 720 929-6236
<b>SIGNATURE</b> N/A		<b>TITLE</b> Staff Regulatory Specialist
<b>DATE</b> 5/13/2013		





## Greater Natural Buttes Unit

**NBU 921-25O4BS**  
**RE-COMPLETIONS PROCEDURE**  
**NBU 921-25N PAD**  
**FIELD ID: BLUE WELL**

**DATE: 5/8/13**  
**AFE#:**  
**API#: 4304751264**  
**USER ID: VYI537** (Frac Invoices Only)

**COMPLETIONS ENGINEER: Kevin Lammers, Denver, CO**  
**(720) 929-6109 (Office)**  
**(713) 829-7143 (Cell)**

**REMEMBER SAFETY FIRST!**

**Name:** **NBU 921-2504BS**  
**Location:** **NW SE SW SE Sec 25 T9S R21E**  
**LAT:** 40.002912 **LONG:** -109.500232 **COORDINATE:** NAD83 (*Surface Location*)  
**Uintah County, UT**  
**Date:** **5/8/13**

**ELEVATIONS:** 4955' GL 4980' KB *Frac Registry TVD: 9540'*

**TOTAL DEPTH:** 9685' **PBTD:** 9627'  
**SURFACE CASING:** 8 5/8", 28# J-55 LTC @ 2588'  
**PRODUCTION CASING:** 4 1/2", 11.6#, I-80 LTC @ 9672'  
 Marker Joint **4679-4700'**

**TUBULAR PROPERTIES:**

	BURST (psi)	COLLAPSE (psi)	DRIFT DIA. (in.)	CAPACITIES	
				(bbl./ft)	(gal/ft)
2 3/8" 4.7# L-80 tbg	11,200	11,780	1.901"	0.00387	0.1624
4 1/2" 11.6# I-80 (See above)	7780	6350	3.875"	0.0155	0.6528
4 1/2" 11.6# P-110	10691	7580	3.875"	0.0155	0.6528
2 3/8" by 4 1/2" Annulus				0.0101	0.4227

**TOPS:**

1476' Green River Top  
 1727' Bird's Nest Top  
 2253' Mahogany Top  
 4793' Wasatch Top  
 7468' Mesaverde Top  
 \*Based on latest geological interpretation

**BOTTOMS:**

7468' Wasatch Bottom  
 9685' Mesaverde Bottom (TD)

**T.O.C. @ 986'**

\*\*Based on latest interpretation of CBL

**GENERAL NOTES:**

- **Please note that:**
  - All stages on this procedure may or may not be completed due to low frac gradients, timing, or other possible reasons. Total stages completed can be found in the post-job-report.
  - CBP depth on this procedure is only to be used as a reference. This depth is subject to change as per field operations and the discretion of the wireline supervisor and field foreman.
- A minimum of **13** tanks (cleaned lined 500 bbl) of recycled water will be required. Note: Use biocide in tanks and the water needs to be at least 45°F at pump time.
- All perforation depths are from Cutter's CBL log dated **3/24/11**.
- **6** fracturing stages required for coverage.
- Hydraulic isolation estimated at **1590'** based upon Cutter's CBL dated 3/24/11.
- Procedure calls for **7** CBP's (**8000** psi) .
- Calculate open perforations after each breakdown. If less than 60% of the perforations appear to be open, ball out with 15% HCl.
- **Pump scale inhibitor at 0.5 gpt. Remember to pre-load the casing with scale inhibitor.**

- **This is a NO Clay stabilizer pilot \*\*\* Please Do NOT pump Clay Stabilizer \*\*\***
- **This is a Reduced Surfactant pilot \*\*\* Please pump Surfactant at 0.75 gpt\*\*\***
- FR will be pumped at 0.3 gpt for this well. This concentration will be raised or lowered on the job at the discretion of the APC foreman per the well's treating pressure.
- 30/50 mesh Ottawa sand, **Slickwater frac.**
- Maximum surface pressure **6200 psi.**
- **If casing pressure test fails (pressure loss of 1.5% psi or more), retest for 15 minutes. If pressure loss of 1.5% more on second test, notify Denver engineers. Record in Openwells. MIRU with tubing and packer. Isolate leak by pressure testing above and below the packer. RIH and set appropriate casing leak remediation. Re-pressure test to 1000 and 3500 psi for 15 minutes each and to **6200 psi** for 30 minutes (specific details on remediation should be documented in OpenWells).**
- Flush volumes are the sum of slick water and acid used during displacement (include scale inhibitor as mentioned above). Stage acid and scale inhibitor if necessary to cover the next perforated interval.
- Call flush at 0 PPG @ inline densimeters. Slow to 5 bbl/min over last 10-20 bbls of flush. Flush to top perf.
- Max Sand Concentration: Wasatch 2 ppg;
- If distance between plug and top perf of previous stage is less than 50', it is considered to be tight spacing - over flush stage by 5 bbls (from top perf)
- **TIGHT SPACING ON STAGE 1- OVERFLUSH BY 5 BBLS**
- **If using any chemicals for pickling tubing or H2S Scavenging, have MSDS for all chemicals prior to starting work**

#### Existing Perforations:

<u>PERFORATIONS</u>						
<u>Formation</u>	<u>Zone</u>	<u>Top</u>	<u>Btm</u>	<u>spf</u>	<u>Shots</u>	<u>Date</u>
MESAVERDE		7488	7488	4	8	04/25/2011
MESAVERDE		7504	7506	4	8	04/25/2011
MESAVERDE		7555	7557	4	8	04/25/2011
MESAVERDE		7631	7635	4	16	04/25/2011
MESAVERDE		7698	7700	4	8	04/25/2011
MESAVERDE		8130	8131	4	4	04/25/2011
MESAVERDE		8146	8147	4	4	04/25/2011
MESAVERDE		8207	8208	4	4	04/25/2011
MESAVERDE		8248	8249	3	3	04/25/2011
MESAVERDE		8259	8260	3	3	04/25/2011
MESAVERDE		8274	8275	4	4	04/25/2011
MESAVERDE		8372	8374	3	6	04/25/2011
MESAVERDE		8420	8421	4	4	04/25/2011
MESAVERDE		8428	8429	4	12	04/25/2011
MESAVERDE		8640	8643	3	9	04/25/2011
MESAVERDE		8698	8700	3	6	04/25/2011
MESAVERDE		8760	8762	4	8	04/25/2011
MESAVERDE		8968	8969	4	4	04/25/2011
MESAVERDE		9044	9046	4	8	04/25/2011
MESAVERDE		9090	9091	4	4	04/25/2011
MESAVERDE		9159	9160	4	4	04/25/2011
MESAVERDE		9171	9172	4	4	04/25/2011
MESAVERDE		9404	9405	4	4	04/25/2011
MESAVERDE		9444	9447	4	12	04/25/2011
MESAVERDE		9538	9540	4	8	04/25/2011

**Relevant History:**

- 4/26/11: Originally completed in Mesaverde formation (7 stages) with ~ 256,729 gallons of Slickwater, 83,829 lbs of 30/50 Ottawa Sand sand and 35,787 lbs of 20/40 Resin coated sand.
- 12/20/12: Last slickline report:  
 Ran jdc set down @ 8891 came out with a bypass pad plunger ran jdc set down @ 8891 jarred on spring for while came out with a stainless steal spring ran td set down @ 9598 came out ran scratcher out the tubing came out ran 1.9 broach set down @ 8891 came out tubing was clean there was a trace of scale on the broach and spring plunger looks good change cups on the spring drop and chase stainless steal spring and bypass pad plunger to btm came out rigged down.
- 5/8/13: Tubing Currently Landed @~8923'

**H2S History:**

Production Date ▼	Gas (avg mcf/day)	Water (avg bbl/day)	Oil (avg bbl/day)	LGR (bbl/MMcf)	Max H2S Seperator (ppm)
3/31/2013	160.39	16.77	0.58	108.21	
2/28/2013	181.32	15.96	0.50	90.80	
1/31/2013	177.68	18.84	0.71	110.02	
12/31/2012	192.87	19.65	0.68	105.37	
11/30/2012	203.60	16.70	0.73	85.63	
10/31/2012	213.13	16.68	0.77	81.88	0.00
9/30/2012	223.63	16.70	0.90	78.70	0.00
8/31/2012	220.00	15.84	1.00	76.54	
7/31/2012	222.87	17.35	1.03	82.50	
6/30/2012	242.40	36.00	1.00	152.64	
5/31/2012	248.58	35.71	1.19	148.46	
4/30/2012	259.77	36.00	1.13	142.95	
3/31/2012	271.77	36.00	1.16	136.74	
2/29/2012	282.55	28.31	2.59	109.35	
1/31/2012	291.65	49.84	15.71	224.75	
12/31/2011	305.58	99.90	3.52	338.44	
11/30/2011	332.20	101.00	4.00	316.07	
10/31/2011	357.94	66.58	4.26	197.91	2.00
9/30/2011	390.20	60.00	3.93	163.85	2.00
8/31/2011	449.13	60.00	4.42	143.43	4.00
7/31/2011	535.39	182.29	7.00	353.56	0.00
6/30/2011	709.27	205.83	8.37	302.00	0.00
5/31/2011	991.39	185.90	7.68	195.26	
4/30/2011	0.00	0.00	0.00	#NA	

**PROCEDURE:** (If using any chemicals for pickling tubing or H2S Scavenging, have MSDS for all chemicals prior to starting work.)

1. MIRU. Control well with recycled water and biocide as required. ND WH, NU BOP's and test.
2. The tubing is below the proposed CBP depth. TOO H with 2-3/8", 4.7#, J-55 tubing. Visually inspect for scale and consider replacing if needed.
3. If tbg looks ok consider running a gauge ring to 7501 (50' below proposed CBP). Otherwise P/U a mill and C/O to 7501 (50' below proposed CBP).
4. Set 8000 psi CBP at ~ 7451'. ND BOPs and NU frac valves Test frac valves and casing to to **6200 psi** for 15 minutes; if pressure test fails contact Denver engineer and see notes above. **Lock OPEN the Braden head valve**. Flow from annulus will be visually monitored throughout stimulation. If release occurs, stimulation will be shut down. Well conditions will be assessed and actions taken as necessary to secure the well. UDOGM will be notified if a release to the annulus occurs.
5. Pressure test frac lines to max surface pressure + 1000 psi for 15 minutes. Pressure loss should be less than 10% to be considered acceptable. Check and correct for existing leaks.

6. Perf the following with 3-3/8" gun, 23 gm, 0.36"hole:

Zone	From	To	spf	# of shots
WASATCH	7206	7207	3	3
WASATCH	7222	7223	3	3
WASATCH	7273	7274	3	3
WASATCH	7368	7369	3	3
WASATCH	7383	7384	3	3
WASATCH	7419	7421	3	6

7. Breakdown perfs and establish injection rate (include scale inhibitor in fluid). Spot 250 gals of 15% HCL and let soak 5-10 min. Fracture as outlined in Stage 1 on attached listing. Under-displace to ~7206' and trickle 250gal 15%HCL w/ scale inhibitor in flush .  
**NOTE: TIGHT SPACING THIS STAGE, OVERFLUSH BY 5BBLs**

8. Set 8000 psi CBP at ~7175'. Perf the following 3-3/8" gun, 23 gm, 0.36"hole:

Zone	From	To	spf	# of shots
WASATCH	7005	7006	4	4
WASATCH	7050	7051	4	4
WASATCH	7088	7089	4	4
WASATCH	7143	7145	4	8

9. Breakdown perfs and establish injection rate. Fracture as outlined in Stage 2 on attached listing. Under-displace to ~7005' and trickle 250gal 15%HCL w/ scale inhibitor in flush.

10. Set 8000 psi CBP at ~6951'. Perf the following with 3-3/8" gun, 23 gm, 0.36" hole:

Zone	From	To	spf	# of shots
WASATCH	6783	6784	3	3
WASATCH	6815	6816	3	3
WASATCH	6827	6828	3	3
WASATCH	6862	6863	3	3
WASATCH	6902	6903	3	3
WASATCH	6920	6921	3	3

11. Breakdown perfs and establish injection rate. Fracture as outlined in Stage 3 on attached listing. Under-displace to ~6783' and trickle 250gal 15%HCL w/ scale inhibitor in flush.

12. Set 8000 psi CBP at ~6653'. Perf the following with 3-3/8" gun, 23 gm, 0.36" hole:

Zone	From	To	spf	# of shots
WASATCH	6534	6535	4	4
WASATCH	6579	6580	4	4
WASATCH	6594	6595	4	4
WASATCH	6612	6613	4	4
WASATCH	6622	6623	4	4

13. Breakdown perfs and establish injection rate. Fracture as outlined in Stage 4 on attached listing. Under-displace to ~6534' and trickle 250gal 15%HCL w/ scale inhibitor in flush.

14. Set 8000 psi CBP at ~6366'. Perf the following with 3-3/8" gun, 23 gm, 0.36" hole:

Zone	From	To	spf	# of shots
WASATCH	6096	6097	3	3
WASATCH	6225	6226	3	3
WASATCH	6283	6284	3	3
WASATCH	6310	6312	3	6
WASATCH	6334	6336	3	6

15. Breakdown perfs and establish injection rate. Fracture as outlined in Stage 5 on attached listing. Under-displace to ~6096' and trickle 250gal 15%HCL w/ scale inhibitor in flush.

16. Set 8000 psi CBP at ~5837'. Perf the following with 3-3/8" gun, 23 gm, 0.36" hole:

Zone	From	To	spf	# of shots
WASATCH	5783	5785	4	8
WASATCH	5804	5807	4	12

17. Breakdown perfs and establish injection rate. Fracture as outlined in Stage 6 on attached listing. Under-displace to ~5783' and flush only with recycled water.

18. Set 8000 psi CBP at ~5733'.

19. ND Frac Valves, NU and Test BOPs.

20. TIH with 3 7/8" bit, pump off sub, SN and tubing.

21. Drill 6 plugs and clean out to a depth of 7441' (~ 20' below bottom perfs).

22. Shear off bit and land tubing at 7176'. Flow back completion load. RDMO.

23. MIRU, POOH tbg and POBS. TIH with POBS.

24. Drill last plug @ 7451' clean out to PBTD at 9627'. Shear off bit and land tubing at ±8923'. This well WILL be commingled at this time. **NOTE: If the CBP between the initial completion and the recompleted sands has been in the well for more than 30 business days from the beginning of flowback for the recompletion, a sundry will need to be**

**filed with the state. Contact the Regulatory group to file the sundry prior to commencing work.**

25. Clean out well with foam and/or swabbing unit until steady flow has been established from completion.

26. **Leave surface casing valve open.** Monitor and report any flow from surface casing. RDMO

Completion Engineer

Kevin Lammers: 713/829-7143, 720/929-6109

Production Engineer

Mickey Doherty: 406/491-7294, 435/781-9740

Ronald Trigo: 352/213-6630, 435/781-7037

Completion Supervisor Foreman

Jeff Samuels: 435/828-6515, 435/781-7046

Completion Manager

Jeff Dufresne: 720/929-6281, 303/241-8428

Vernal Main Office

435/789-3342

Emergency Contact Information—Call 911

Vernal Regional Hospital Emergency: 435-789-3342

Police: (435) 789-5835

Fire: 435-789-4222

Service Company Supplied Chemicals - Job Totals

Friction Reducer	65	gals @	0.3	GPT
Surfactant	162	gals @	0.75	GPT
Clay Stabilizer	0	gals @	0.0	GPT
15% Hcl	1500	gals @	250	gal/stg
Iron Control for acid	8	gals @	5.0	GPT of acid
Surfactant for acid	3	gals @	2.0	GPT of acid
Corrosion Inhibitor for acid	9	gals @	6.0	GPT of acid

Third Party Supplied Chemicals Job Totals - Include Pumping Charge if Applicable

Scale Inhibitor	108	gals pumped	0.5	GPT (see schedule)
Biocide	65	gals @	0.3	GPT



Acid Pickling and H2S Procedures (If Required)

**\*\*PROCEDURE FOR PUMPING ACID DOWN TBG**

WHEN FINDING SCALE IN TUBING THAT IS ACID SOLUBLE, ENSURE THAT PLUNGER EQUIPMENT IS REMOVED AND ABLE TO PUMP DOWN TBG. INSTALL A 'T' IN PUMP LINE W/2" VALVE THAT NALCO CAN TIE INTO. HAVE 60 BBLs 2% KCL MIXED W/ 10-15 GAL H2S SCAVENGER IN RIG FLAT TANK. (WE USED THE RIG FLAT TANK FOR MIXING CHEMICAL SO WE DIDN'T HAVE THE CHEMICAL IN ALL FLUIDS ON LOCATION, ONLY WHAT WE NEEDED TO PUMP DOWN HOLE)

1. PUMP 5-10 BBLs 2% KCL DOWN TBG (NALCO CANNOT PUMP AGAINST PRESSURE)
2. NALCO WILL PUMP 3 DRUMS HCL (31%) INTO PUMP LINE.
3. FLUSH BEHIND ACID WITH 10-15 BBL 2% KCL
4. PUMP 2—30 BBL 2% W/ H2S SCAVENGER DOWN TBG.
5. PUMP REMAINDER OF 2% W/ H2S SCAVENGER DOWN CASING AND SHUT WELL IN FOR MINIMUM OF 2 HRS.
6. OVER DISPLACE DOWN TBG AND CSG TO FLUSH ACID AND SCAVENGER INTO FORMATION
7. MONITOR TUBING FOR FLOW AND CASING FOR H2S NOW AS POOH W/ TUBING.

**\*\* PROCEDURE FOR PUMPING H2S SCAVENGER WITHOUT ACID**

PRIOR TO RIG MOVING ON OR AS RIG PULLS ONTO LOCATION. TEST CASING, TUBING AND SEPARATOR FOR H2S. IF FOUND MAKE SURE THAT PLUNGER SYSTEM IS REMOVED (IT IS POSSIBLE TO PUMP AROUND PLUNGERS BUT SOME WILL HAVE A STANDING VALVE IN SEATING NIPPLE).

1. MIX 10-15 GAL H2S SCAVENGER WITH 60-100 BBL 2% KCL IN RIG FLAT TANK.
2. PUMP 25 BBLs MIXTURE DOWN TUBING AND REST DOWN CASING. SHUT WELL IN FOR 2 HOURS.
3. IF WELL HAS PRESSURE AFTER 2 HOURS – RETEST CASING AND TUBING FOR H2S.
4. FLUSH TUBING AND CASING PUSHING H2S SCAVENGER INTO FORMATION.
5. MONITOR TUBING FOR FLOW AND CASING FOR H2S NOW AS POOH W/ TUBING.

\*\* As per APC standard operating procedure, APC foreman will verify ALL volumes pumped and record on APC Volume Report Form

**Name** NBU 921-2504BS  
**Slickwater Frac**

Casing Size	4.5
Recomplete?	Y
Pad?	Y
ACTS?	N
Days on Pad?	2
Wells on Pad?	4

Swabbing Days	3
Production Log	0
DFT	0
GR only	Y
Low Scale	Y
Clay Stab.	N

[illegible]

Stage	Zone	Perfs		SPF	Holes	Rate BPM	Fluid Type	Initial ppg	Final ppg	Fluid	Volume gals	Cum Vol gals	Volume BBLs	Cum Vol BBLs	Fluid % of frac	Sand % of frac	Sand lbs	Cum. Sand lbs	Footage from CBP to Flush	Scale Inhib., gal.
		Top. ft.	Bot. ft.																	
4	WASATCH	6534	6535	4	4	Varied	Pump-in test			Slickwater		0	0	0			0	0		
	WASATCH	6579	6580	4	4	0	ISP and 5 min ISP			Slickwater	5,291	5,291	126	126	15.0%	0.0%	0	0		3
	WASATCH	6594	6595	4	4	50	Slickwater Pad			Slickwater	17,638	22,929	420	546	50.0%	37.3%	11,023	11,023		9
	WASATCH	6612	6613	4	4	50	Slickwater Ramp	0.25	1	Slickwater	12,346	35,275	294	840	35.0%	62.7%	18,519	29,543		6
	WASATCH	6622	6623	4	4	50	Slickwater Ramp	1	2	Slickwater	4,265	39,540	102	941				29,543		2
	WASATCH					50	Flush (4-1/2)			Slickwater										2
	WASATCH					ISDP and 5 min ISDP												29,543		0
	WASATCH																			0
	WASATCH																			0
	WASATCH																			20
5	WASATCH	6096	6097	3	3	Varied	Pump-in test			Slickwater		0	0	0			0	0		
	WASATCH	6225	6226	3	3	0	ISP and 5 min ISP			Slickwater	4,590	4,590	109	109	15.0%	0.0%	0	0		2
	WASATCH	6283	6284	3	3	50	Slickwater Pad			Slickwater	15,300	19,890	364	474	50.0%	37.3%	9,563	9,563		8
	WASATCH	6310	6312	3	6	50	Slickwater Ramp	0.25	1	Slickwater	10,710	30,600	255	729	35.0%	62.7%	16,065	25,628		5
	WASATCH	6334	6336	3	6	50	Slickwater Ramp	1	2	Slickwater	3,979	34,579	95	823				25,628		2
	WASATCH					50	Flush (4-1/2)			Slickwater										0
	WASATCH					ISDP and 5 min ISDP														0
	WASATCH																			0
	WASATCH																			0
	WASATCH																			17
6	WASATCH	5783	5785	4	4	Varied	Pump-in test			Slickwater		0	0	0			0	0		
	WASATCH	5804	5807	4	12	0	ISP and 5 min ISP			Slickwater	3,184	3,184	76	76	15.0%	0.0%	0	0		2
	WASATCH					50	Slickwater Pad			Slickwater	10,612	13,796	253	328	50.0%	37.3%	6,633	6,633		5
	WASATCH					50	Slickwater Ramp	0.25	1	Slickwater	7,429	21,225	177	505	35.0%	62.7%	11,143	17,776		4
	WASATCH					50	Flush (4-1/2)	1	2	Slickwater	3,775	25,000	90	595				17,776		0
	WASATCH					ISDP and 5 min ISDP				Slickwater										0
	WASATCH																			0
	WASATCH																			0
	WASATCH																			11
	WASATCH																			0
# of Perfs/Stage				21	16.5	<< Above pump time (min)														
Sand bedn Volume																				
Flush depth 6.096																				
gal/hr																				
CBP depth 850																				
lbs sand/ft																				
712																				
259																				
Total Fluid																				
219,954																				
5,237																				
lbs																				
Flush depth 5.783																				
5,237																				
bbls																				
Total Sand																				
158,727																				
lbs sand/ft																				
50																				
Total Scale Inhib. =																				
108																				

Total Stages 6  
Last Stage Flush 3.775 gals

Name NBU 921-2504BS  
Perforation and CBP Summary

Stage	Zones	Perforations		SPF	Holes		Fracture Coverage		
		Top, ft	Bottom, ft						
1	WASATCH	7206	7207	3	3		7202	to	7427
	WASATCH	7222	7223	3	3				
	WASATCH	7273	7274	3	3				
	WASATCH	7368	7369	3	3				
	WASATCH	7383	7384	3	3				
	WASATCH	7419	7421	3	6				
	WASATCH								
	WASATCH								
	# of Perfs/stage				21		CBP DEPTH	7,175	
2	WASATCH	7005	7006	4	4		7003	to	7156
	WASATCH	7050	7051	4	4				
	WASATCH	7088	7089	4	4				
	WASATCH	7143	7145	4	8				
	WASATCH								
	WASATCH								
	WASATCH								
	WASATCH								
	# of Perfs/stage				20		CBP DEPTH	6,951	
3	WASATCH	6783	6784	3	3		6789	to	6933
	WASATCH	6815	6816	3	3				
	WASATCH	6827	6828	3	3				
	WASATCH	6862	6863	3	3				
	WASATCH	6902	6903	3	3				
	WASATCH	6920	6921	3	3				
	WASATCH								
	WASATCH								
	# of Perfs/stage				18		CBP DEPTH	6,653	
4	WASATCH	6534	6535	4	4		6540	to	6635
	WASATCH	6579	6580	4	4				
	WASATCH	6594	6595	4	4				
	WASATCH	6612	6613	4	4				
	WASATCH	6622	6623	4	4				
	WASATCH								
	WASATCH								
	WASATCH								
	# of Perfs/stage				20		CBP DEPTH	6,366	
5	WASATCH	6096	6097	3	3		6103	to	6347
	WASATCH	6225	6226	3	3				
	WASATCH	6283	6284	3	3				
	WASATCH	6310	6312	3	6				
	WASATCH	6334	6336	3	6				
	WASATCH								
	WASATCH								
	WASATCH								
	# of Perfs/stage				21		CBP DEPTH	5,837	
6	WASATCH	5783	5785	4	8		5792	to	5819
	WASATCH	5804	5807	4	12				
	WASATCH								
	WASATCH								
	WASATCH								
	WASATCH								
	WASATCH								
	WASATCH								
	# of Perfs/stage				20		CBP DEPTH	5,733	
	Totals				120		Total Pay		216.5

NBU 921-2504BS Survey												
MD	TVD	EW	NS	INC	AZI		MD	TVD	EW	NS	INC	AZI
0.00	0.00	0.00	0.00	0.00	0.00		4900.00	4759.05	878.29	-590.27	8.13	132.63
100.00	100.00	0.10	0.02	0.14	76.29		5000.00	4858.11	888.30	-599.55	7.62	132.79
200.00	200.00	0.49	0.12	0.32	76.29		5100.00	4957.28	897.74	-608.27	7.08	132.73
300.00	300.00	1.17	0.29	0.49	76.29		5200.00	5056.65	905.85	-615.99	5.44	135.80
400.00	399.99	0.95	-0.72	1.63	211.35		5300.00	5156.34	910.99	-621.84	3.57	142.57
500.00	499.91	0.21	-4.32	2.70	178.44		5400.00	5256.18	914.34	-626.46	3.31	143.25
600.00	599.75	2.68	-9.24	3.97	137.44		5500.00	5356.08	917.05	-629.91	1.34	137.93
700.00	699.43	8.81	-14.31	5.27	124.12		5600.00	5456.06	918.28	-631.46	1.22	148.13
800.00	798.85	17.97	-19.93	7.05	120.76		5700.00	5556.03	919.43	-633.27	1.23	146.33
900.00	897.89	29.57	-27.35	8.88	124.77		5800.00	5656.01	920.63	-635.15	1.32	149.26
1000.00	996.37	43.40	-37.82	10.94	126.86		5900.00	5755.98	921.37	-637.45	1.45	172.46
1100.00	1094.29	60.21	-49.14	12.50	121.74		6000.00	5855.95	921.49	-639.68	1.19	180.08
1200.00	1191.59	80.11	-60.81	14.14	120.00		6100.00	5955.93	921.58	-641.89	1.32	175.29
1300.00	1288.22	102.29	-73.83	15.69	121.15		6200.00	6055.90	921.90	-644.21	1.47	169.83
1400.00	1384.20	126.03	-88.80	16.46	123.68		6300.00	6155.86	922.49	-647.16	1.87	165.99
1500.00	1480.02	149.48	-105.18	17.24	125.36		6400.00	6255.80	923.49	-650.37	2.00	163.12
1600.00	1575.14	174.53	-123.19	18.56	126.44		6500.00	6355.74	924.40	-653.83	1.99	165.07
1700.00	1669.82	200.28	-142.50	18.64	126.87		6600.00	6455.68	925.37	-657.06	2.03	161.68
1800.00	1764.65	225.76	-161.43	18.46	126.25		6700.00	6555.62	926.70	-660.06	1.30	134.84
1900.00	1859.39	251.56	-180.35	19.02	126.53		6800.00	6655.61	928.46	-660.62	1.05	107.23
2000.00	1953.75	277.87	-200.44	19.60	128.42		6900.00	6755.59	929.99	-661.40	0.85	128.77
2100.00	2048.47	303.18	-220.07	17.28	126.32		7000.00	6855.58	931.08	-662.38	0.93	127.49
2200.00	2144.38	326.51	-236.09	15.78	122.46		7100.00	6955.57	931.42	-662.91	0.73	278.05
2300.00	2240.79	349.14	-249.99	15.07	120.81		7200.00	7055.55	929.43	-662.51	1.37	280.17
2400.00	2337.04	372.38	-263.98	16.38	121.24		7300.00	7155.53	927.29	-662.03	1.08	287.34
2500.00	2432.96	396.70	-278.35	16.36	119.85		7400.00	7255.51	925.75	-662.36	1.05	225.50
2600.00	2529.14	420.76	-291.39	15.37	116.24		7500.00	7355.51	924.85	-662.46	0.62	328.39
2700.00	2625.76	444.36	-301.73	14.93	112.43		7600.00	7455.50	924.10	-661.73	0.59	299.46
2800.00	2722.01	469.13	-312.80	16.41	116.07		7700.00	7555.50	923.23	-661.64	0.48	251.84
2900.00	2817.70	494.63	-326.63	17.26	120.00		7800.00	7655.49	922.61	-662.10	0.50	219.31
3000.00	2913.06	520.55	-342.00	17.66	121.38		7900.00	7755.49	922.01	-663.01	0.68	203.47
3100.00	3008.33	546.16	-358.35	17.83	124.75		8000.00	7855.48	921.86	-664.18	0.70	177.10
3200.00	3103.35	571.05	-377.06	18.57	127.64		8100.00	7955.47	922.03	-665.50	1.01	169.34
3300.00	3198.08	596.53	-396.50	18.20	126.58		8200.00	8055.45	922.64	-667.64	1.33	151.32
3400.00	3293.36	621.18	-414.18	17.42	124.86		8300.00	8155.42	924.30	-669.46	1.59	133.41
3500.00	3388.94	645.43	-430.82	16.59	124.45		8400.00	8255.38	926.26	-671.20	0.99	124.49
3600.00	3484.93	668.43	-446.87	16.20	125.68		8500.00	8355.37	927.31	-671.48	0.63	87.38
3700.00	3581.16	690.57	-462.66	15.11	124.62		8600.00	8455.37	928.39	-671.39	0.50	91.82
3800.00	3678.06	711.15	-476.28	13.42	122.23		8700.00	8555.37	929.09	-671.46	0.33	93.82
3900.00	3775.67	729.74	-487.46	11.64	119.69		8800.00	8655.37	929.56	-671.65	0.33	140.40
4000.00	3873.78	746.49	-497.17	10.75	120.87		8900.00	8755.36	930.30	-672.22	0.83	117.92
4100.00	3971.98	762.06	-507.87	11.08	127.89		9000.00	8855.35	931.66	-672.92	0.88	116.77
4200.00	4070.11	777.08	-519.84	11.03	128.99		9100.00	8955.34	933.04	-673.61	0.88	116.77
4300.00	4168.34	791.75	-531.52	10.60	127.66		9200.00	9055.32	934.41	-674.30	0.88	116.77
4400.00	4266.68	806.52	-542.09	10.42	123.46		9300.00	9155.31	935.78	-674.99	0.88	116.77
4500.00	4364.98	822.12	-551.69	10.79	120.83		9400.00	9255.30	937.15	-675.68	0.88	116.77
4600.00	4463.13	838.47	-561.67	10.86	121.46		9500.00	9355.29	938.52	-676.37	0.88	116.77
4700.00	4561.54	853.67	-570.92	9.84	122.60		9600.00	9455.28	939.89	-677.07	0.88	116.77
4800.00	4660.15	867.18	-580.49	9.04	128.49		9685.00	9540.27	941.06	-677.65	0.88	116.77



STATE OF UTAH  
DEPARTMENT OF NATURAL RESOURCES  
DIVISION OF OIL, GAS AND MININGAMENDED REPORT ☐ FORM 8  
(highlight changes)

## WELL COMPLETION OR RECOMPLETION REPORT AND LOG

1a. TYPE OF WELL: OIL WELL <input type="checkbox"/> GAS WELL <input checked="" type="checkbox"/> DRY <input type="checkbox"/> OTHER _____						5. LEASE DESIGNATION AND SERIAL NUMBER: UO 4139 ST			
b. TYPE OF WORK: NEW WELL <input type="checkbox"/> HORIZ. LATS. <input type="checkbox"/> DEEP-EN <input type="checkbox"/> RE-ENTRY <input type="checkbox"/> DIFF. RESVR. <input checked="" type="checkbox"/> OTHER <b>RECOMPLETION</b>						6. IF INDIAN, ALLOTTEE OR TRIBE NAME			
2. NAME OF OPERATOR: KERR MCGEE OIL & GAS ONSHORE, L.P.						7. UNIT or CA AGREEMENT NAME UTU63047A			
3. ADDRESS OF OPERATOR: P.O.BOX 173779 CITY DENVER STATE CO ZIP 80217						8. WELL NAME and NUMBER: NBU 921-2504BS			
4. LOCATION OF WELL (FOOTAGES) AT SURFACE: SESW 1156 FSL 2595 FWL S25,T9S,R21E AT TOP PRODUCING INTERVAL REPORTED BELOW: SWSE 521 FSL 1674 FWL S25,T9S,R21W AT TOTAL DEPTH: SWSE 478 FSL 1744 FEL S25,T9S,R21E						9. API NUMBER: 4304751264			
10. FIELD AND POOL, OR WILDCAT NATURAL BUTTES						11. QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: SESW 25 9S 21E S			
12. COUNTY UINTAH						13. STATE UTAH			
14. DATE SPURRED: 1/4/2011		15. DATE T.D. REACHED: 2/12/2011		16. DATE COMPLETED: 8/22/2013		17. ELEVATIONS (OF, RKB, RT, GL): 4980 RKB			
18. TOTAL DEPTH: MD 9,685 TVD 9,540		19. PLUG BACK T.D.: MD 9,629 TVD 9,484		20. IF MULTIPLE COMPLETIONS, HOW MANY? *		21. DEPTH BRIDGE MD PLUG SET: TVD			
22. TYPE ELECTRIC AND OTHER MECHANICAL LOGS RUN (Submit copy of each) GR/RCBL-BHV-SD/DSN/ACTR						23. WAS WELL CORED? NO <input checked="" type="checkbox"/> YES <input type="checkbox"/> (Submit analysis) WAS DST RUN? NO <input checked="" type="checkbox"/> YES <input type="checkbox"/> (Submit report) DIRECTIONAL SURVEY? NO <input type="checkbox"/> YES <input checked="" type="checkbox"/> (Submit copy)			
24. CASING AND LINER RECORD (Report all strings set in well)									
HOLE SIZE	SIZE/GRADE	WEIGHT (#/ft.)	TOP (MD)	BOTTOM (MD)	STAGE CEMENTER DEPTH	CEMENT TYPE & NO. OF SACKS	SLURRY VOLUME (BBL)	CEMENT TOP **	AMOUNT PULLED
20"	14" STL	36.7#		40		28			
11"	8 5/8" J-55	28#	0	2,588		775		0	
7 7/8"	4 1/2" I-80	11.6#		9,672		1,680		986	
25. TUBING RECORD									
SIZE	DEPTH SET (MD)	PACKER SET (MD)	SIZE	DEPTH SET (MD)	PACKER SET (MD)	SIZE	DEPTH SET (MD)	PACKER SET (MD)	
2 3/8"	8,928								
26. PRODUCING INTERVALS					27. PERFORATION RECORD				
FORMATION NAME	TOP (MD)	BOTTOM (MD)	TOP (TVD)	BOTTOM (TVD)	INTERVAL (Top/Bot - MD)	SIZE	NO. HOLES	PERFORATION STATUS	
(A) WASATCH	5,783	7,421			5,783 7,421	0.36	120	Open <input checked="" type="checkbox"/>	Squeezed <input type="checkbox"/>
(B)								Open <input type="checkbox"/>	Squeezed <input type="checkbox"/>
(C)								Open <input type="checkbox"/>	Squeezed <input type="checkbox"/>
(D)								Open <input type="checkbox"/>	Squeezed <input type="checkbox"/>
28. ACID, FRACTURE, TREATMENT, CEMENT SQUEEZE, ETC.									
DEPTH INTERVAL	AMOUNT AND TYPE OF MATERIAL								
5783-7421	PUMP 6350 BBLs SLICK H2O & 160,081 LBS 30/50 OTTAWA SAND								
	6 STAGES								
29. ENCLOSED ATTACHMENTS:								30. WELL STATUS:	
<input type="checkbox"/> ELECTRICAL/MECHANICAL LOGS <input type="checkbox"/> SUNDRY NOTICE FOR PLUGGING AND CEMENT VERIFICATION								PROD	
<input type="checkbox"/> GEOLOGIC REPORT <input type="checkbox"/> CORE ANALYSIS									
<input type="checkbox"/> DST REPORT <input type="checkbox"/> OTHER: _____									
<input type="checkbox"/> DIRECTIONAL SURVEY									

## 31. INITIAL PRODUCTION

## INTERVAL A (As shown in item #26)

DATE FIRST PRODUCED: 8/22/2013		TEST DATE: 9/12/2013		HOURS TESTED: 24		TEST PRODUCTION RATES: →		OIL – BBL: 20	GAS – MCF: 460	WATER – BBL: 13	PROD. METHOD: FLOWING
CHOKE SIZE: 20/64	TBG. PRESS. 209	CSG. PRESS. 845	API GRAVITY	BTU – GAS	GAS/OIL RATIO	24 HR PRODUCTION RATES: →	OIL – BBL: 20	GAS – MCF: 460	WATER – BBL: 13	INTERVAL STATUS: PROD	

## INTERVAL B (As shown in item #26)

DATE FIRST PRODUCED:		TEST DATE:		HOURS TESTED:		TEST PRODUCTION RATES: →	OIL – BBL:	GAS – MCF:	WATER – BBL:	PROD. METHOD:
CHOKE SIZE:	TBG. PRESS.	CSG. PRESS.	API GRAVITY	BTU – GAS	GAS/OIL RATIO	24 HR PRODUCTION RATES: →	OIL – BBL:	GAS – MCF:	WATER – BBL:	INTERVAL STATUS:

## INTERVAL C (As shown in item #26)

DATE FIRST PRODUCED:		TEST DATE:		HOURS TESTED:		TEST PRODUCTION RATES: →	OIL – BBL:	GAS – MCF:	WATER – BBL:	PROD. METHOD:
CHOKE SIZE:	TBG. PRESS.	CSG. PRESS.	API GRAVITY	BTU – GAS	GAS/OIL RATIO	24 HR PRODUCTION RATES: →	OIL – BBL:	GAS – MCF:	WATER – BBL:	INTERVAL STATUS:

## INTERVAL D (As shown in item #26)

DATE FIRST PRODUCED:		TEST DATE:		HOURS TESTED:		TEST PRODUCTION RATES: →	OIL – BBL:	GAS – MCF:	WATER – BBL:	PROD. METHOD:
CHOKE SIZE:	TBG. PRESS.	CSG. PRESS.	API GRAVITY	BTU – GAS	GAS/OIL RATIO	24 HR PRODUCTION RATES: →	OIL – BBL:	GAS – MCF:	WATER – BBL:	INTERVAL STATUS:

## 32. DISPOSITION OF GAS (Sold, Used for Fuel, Vented, Etc.)

SOLD

## 33. SUMMARY OF POROUS ZONES (Include Aquifers):

Show all important zones of porosity and contents thereof: Cored intervals and all drill-stem tests, including depth interval tested, cushion used, time tool open, flowing and shut-in pressures and recoveries.

## 34. FORMATION (Log) MARKERS:

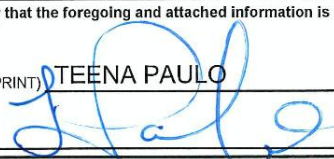
Formation	Top (MD)	Bottom (MD)	Descriptions, Contents, etc.	Name	Top (Measured Depth)
				GREEN RIVER	1,476
				BIRD'S NEST	1,727
				MAHOGANY	2,253
				WASATCH	4,793
				MESAVERDE	7,468

## 35. ADDITIONAL REMARKS (Include plugging procedure)

Attached is the recompletion history and perforation report. Casing in the well is as previously reported on the original Completion Report. New recompletion perforations are: Wasatch 5783-7421; existing perforations: Mesaverde 7486-9540. An Iso plug separating new perforations from old perforations was set at 7450 and it was drilled out on 9/4/2013 commingling the well.

## 36. I hereby certify that the foregoing and attached information is complete and correct as determined from all available records.

NAME (PLEASE PRINT) TEENA PAULO TITLE STAFF REGULATORY SPECIALIST

SIGNATURE  DATE \_\_\_\_\_

This report must be submitted within 30 days of

- completing or plugging a new well
- drilling horizontal laterals from an existing well bore
- recompleting to a different producing formation
- reentering a previously plugged and abandoned well
- significantly deepening an existing well bore below the previous bottom-hole depth
- drilling hydrocarbon exploratory holes, such as core samples and stratigraphic tests

\* ITEM 20: Show the number of completions if production is measured separately from two or more formations.

\*\* ITEM 24: Cement Top – Show how reported top(s) of cement were determined (circulated (CIR), calculated (CAL), cement bond log (CBL), temperature survey (TS)).

Send to: Utah Division of Oil, Gas and Mining  
1594 West North Temple, Suite 1210  
Box 145801  
Salt Lake City, Utah 84114-5801

Phone: 801-538-5340

Fax: 801-359-3940



## US ROCKIES REGION

## Operation Summary Report

Well: NBU 921-25O4BS BLUE			Spud Conductor: 1/4/2011				Spud Date: 1/13/2011		
Project: UTAH-UINTAH			Site: NBU 921-25N PAD					Rig Name No: SWABBCO 6/6	
Event: RECOMPL/RESEREVEADD			Start Date: 7/25/2013					End Date: 9/4/2013	
Active Datum: RKB @4,980.00usft (above Mean Sea Level)			UWI: SE/SW/0/9/S/21/E/25/0/0/26/PM/S/1156/W/0/2595/0/0						
Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation	
7/29/2013	6:45 - 7:00	0.25	FRAC	48		P		HSM. PINTCH POINTS	
	7:00 - 18:00	11.00	FRAC	31	I	P		RU RIG. FWP 90 PSI. BLOW WELL DOWN T/ FBT. PUMP 20 BBLS DOWN TBG. ND WH. UNLAND TBG. TBG WAS FREE. RELAND TBG. NU BOP. RU RIG FLOOR & TBG EQUIP. UNLAND TBG. LD TBG HNGR. MIRU SCAM TECH. POOH W/ TBG. ( LD ALL TBG ) FOUND NO INTERNAL SCALE. LITE EXTERNAL SCALE F/ JT 263 @ 8339' T/ JT 280 @ 8878' HEAVY INTERNAL WALL LOSS F/ JT 79 @ 2505' T/ JT 109 @ 3456'. MEDIUM CHAMPFER PITTING F/ JT 37 @ 1173' T/ JT 59 @ 1870'.  ALL TBG SENT T/ SAMUELS YARD. 178 JTS YELLOW BAND. 29 JTS BLUE BAND. 73 JTS RED BAND. LD OLD POBS & XN NIPPLE. RDMO SCAM TECH. MIRU CUTTER WL. PU 4 1/2 10K HAL CBP. RIH SET @ 7450'. RIG PUMP T/ CSG. FILL CSG. PT T/ 3000 PSI. GOOD TEST. BLEED OFF PSI. SWI. RACK OUT RIG EQUIP. RD RIG. SDFN.	
7/31/2013	11:00 - 14:00	3.00	SUBSPR	52	B	P		FILL SURFACE CSG. MIRU CAMERON QUICK TEST. PRESSURE TEST CSG & FRAC VALVES 1ST PSI TEST T/ 6200 PSI. HELD FOR 15 MIN LOST 60 PSI. NO COMMUNICATION OR MIGRATION WITH SURFACE CSG BLEED OFF PSI.  PRESSURE TEST 8 5/8 X 4 1/2 TO 574 PSI HELD FOR 5 MIN LOST -129 PSI,BLED PSI OFF, REINSTALLED POP OFF SWIFN  NO PRESSURE ON SURFACE CASING FILLED SURFACE WITH 0 BBL H2O	
8/16/2013	7:00 - 9:00	2.00	SUBSPR	37		P		PERF STG 1)PU 3 1/8 EXP GUN, 23 GM, .36 HOLE SIZE. RIH PERF WELL, AS PER PERF DESIGN. POOH. SWIFW	
8/19/2013	6:45 - 7:00	0.25	FRAC	48	B	P		HELD SAFETY MEETING; HIGH PRESSURE	

## US ROCKIES REGION

## Operation Summary Report

Well: NBU 921-2504BS BLUE		Spud Conductor: 1/4/2011		Spud Date: 1/13/2011	
Project: UTAH-UINTAH		Site: NBU 921-25N PAD			Rig Name No: SWABBCO 6/6
Event: RECOMPL/RESEREVEADD		Start Date: 7/25/2013		End Date: 9/4/2013	
Active Datum: RKB @4,980.00usft (above Mean Sea Level)		UWI: SE/SW/0/9/S/21/E/25/0/0/26/PM/S/1156/W/0/2595/0/0			

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation
	7:00 - 17:00	10.00	FRAC	36	B			<p>PRESSURE TEST PUMP AND LINES TO 7484 PSI LOST 414 PSI PER 15 MIN</p> <p>FRAC STG 1)WHP 0 PSI, BRK 3911 PSI @ 4.9 BPM. ISIP 1592 PSI, FG .65. CALC HOLES OPEN @ 37.00 BPM @ 4862 PSI = 57% HOLES OPEN. (12/21 HOLES OPEN) ISIP 2543 PSI, FG .78, NPI 951 PSI. MP 5713 PSI, MR 47.2 BPM, AP 5061 PSI, AR 41.9 BPM PUMPED 30/50 OTTAWA SAND IN THIS STAGE X-OVER FOR W L</p> <p>PERF STG 2)PU 4 1/2 8K HAL CBP &amp; 3 1/8 EXP GUN, 23 GM, .36 HOLE SIZE. 90 DEG PHASING. RIH SET CBP @ 7175' P/U PERF AS PER PERF DESIGN. POOH. X-OVER FOR FRAC CREW</p> <p>FRAC STG 2)WHP 957 PSI, BRK 2483 PSI @ 3.8 BPM. ISIP 1995 PSI, FG .72. CALC HOLES OPEN @ 51.0 BPM @ 4670 PSI = 100% HOLES OPEN. (20/20 HOLES OPEN) ISIP 2091 PSI, FG .73, NPI 96 PSI. MP 5571 PSI, MR 52.1 BPM, AP 4830 PSI, AR 51.7 BPM PUMPED 30/50 OTTAWA SAND IN THIS STAGE X-OVER FOR W L</p> <p>PERF STG 3)PU 4 1/2 8K HAL CBP &amp; 3 1/8 EXP GUN, 23 GM, .36 HOLE SIZE. 90 DEG PHASING. RIH SET CBP @ 6,951' P/U PERF AS PER PERF DESIGN. POOH. SWFNF</p>
8/20/2013	6:00 - 6:15	0.25	FRAC	48		P		HELD SAFETY MEETING RD EQUIP



## US ROCKIES REGION

## Operation Summary Report

Well: NBU 921-25O4BS BLUE		Spud Conductor: 1/4/2011		Spud Date: 1/13/2011	
Project: UTAH-UINTAH		Site: NBU 921-25N PAD			Rig Name No: SWABBCO 6/6
Event: RECOMPL/RESEREVEADD		Start Date: 7/25/2013		End Date: 9/4/2013	
Active Datum: RKB @4,980.00usft (above Mean Sea Level)			UWI: SE/SW/0/9/S/21/E/25/0/0/26/PM/S/1156/W/0/2595/0/0		

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation
	6:15 - 17:00	10.75	FRAC	36	B	P		<p>FRAC STG 3)WHP 500 PSI, BRK 2652 PSI @ 4.5 BPM. ISIP 2012 PSI, FG .73  CALC HOLES OPEN @ 51.4 BPM @ 4021 PSI = 100% HOLES OPEN. (18/18 HOLES OPEN)  ISIP 2057 PSI, FG .73, NPI 45 PSI.  MP 4749 PSI, MR 50.7 BPM, AP 4064 PSI, AR 50.3 BPM  PUMPED 30/50 OTTAWA SAND IN THIS STAGE  X-OVER FOR WL</p> <p>PERF STG 4)PU 4 1/2 8K HAL CBP &amp; 3 1/8 EXP GUN, 23 GM, .36 HOLE SIZE. 120 DEG PHASING. RIH SET CBP @ 6653' P/U PERF AS PER PERF DESIGN. POOH. X-OVER FOR FRAC CREW</p> <p>FRAC STG 4)WHP 1636 PSI, BRK 4993 PSI @ 3.6 BPM. ISIP 2881 PSI, FG .87.  CALC HOLES OPEN @ BPM @ PSI = 100% HOLES OPEN. (20/20 HOLES OPEN)  ISIP 1634 PSI, FG .68, NPI -1247 PSI.  MP 4456 PSI, MR 50.6 BPM, AP 3671 PSI, AR 50.2 BPM  PUMPED 30/50 OTTAWA SAND IN THIS STAGE  X-OVER FOR WL</p> <p>PERF STG 5)PU 4 1/2 8K HAL CBP &amp; 3 1/8 EXP GUN, 23 GM, .36 HOLE SIZE. 90 DEG PHASING. RIH SET CBP @ 6366' P/U PERF AS PER PERF DESIGN. POOH X-OVER FOR FRAC CREW</p> <p>FRAC STG 5)WHP 147 PSI, BRK 1661 PSI @ 3.5 BPM. ISIP 850 PSI, FG .57  CALC HOLES OPEN @ 52.5 BPM @ 3147 PSI = 100% HOLES OPEN. (21/21 HOLES OPEN)  ISIP 1177 PSI, FG .62, NPI 327 PSI.  MP 4778 PSI, MR 52.9 BPM, AP 3773 PSI, AR 52.4 BPM  PUMPED 30/50 OTTAWA SAND IN THIS STAGE  X-OVER FOR WL</p> <p>PERF STG 6)PU 4 1/2 8K HAL CBP &amp; 3 1/8 EXP GUN, 23 GM, .36 HOLE SIZE. 120 DEG PHASING. RIH SET CBP @ 5837' P/U PERF AS PER PERF DESIGN. POOH. X-OVER FOR FRAC CREW</p> <p>FRAC STG 6)WHP 113 PSI, BRK 1430 PSI @ 4.0 BPM. ISIP 1083 PSI, FG .62.  CALC HOLES OPEN @ 43.8 BPM @ 4365 PSI = 70% HOLES OPEN. (14/20 HOLES OPEN)  ISIP 991 PSI, FG .61, NPI -92 PSI.  MP 4829 PSI, MR 46.3 BPM, AP 3464 PSI, AR 43.4 BPM  PUMPED 30/50 OTTAWA SAND IN THIS STAGE  X-OVER FOR WL</p>



## US ROCKIES REGION

## Operation Summary Report

Well: NBU 921-2504BS BLUE		Spud Conductor: 1/4/2011		Spud Date: 1/13/2011	
Project: UTAH-UINTAH		Site: NBU 921-25N PAD			Rig Name No: SWABBCO 6/6
Event: RECOMPL/RESEREVEADD		Start Date: 7/25/2013		End Date: 9/4/2013	
Active Datum: RKB @4,980.00usft (above Mean Sea Level)			UWI: SE/SW/0/9/S/21/E/25/0/0/26/PM/S/1156/W/0/2595/0/0		

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation
8/21/2013	7:00 - 7:30	0.50	DRLOUT	48		P		PU HALCO 4 1/2" 8 K CBP RIH SET @ 5,733 POOH, RD FRAC & WL CREWS SWIFN
	7:30 - 15:30	8.00	DRLOUT	44	C	P		TOTAL SAND= 160,081 # 30/50 OTTAWA TOTAL CLFL= 6,350 BBLs H2O BOP'S
8/22/2013	7:00 - 7:30	0.50	DRLOUT	48		P		ROAD RIG TO LOC, MIRU, NDWH, NU BOP'S, TIH TBG TO 5728', 181 JTS, TAG KILL PLUG, RU PWR SWIVEL, BREAK CIRC, TEST BOP'S, SWIFN
	7:30 - 17:00	9.50	DRLOUT	44	C	P		SLIDING SLEEVE MILL 6 PLUGS, 7175', 228 JTS, TIH TO 7441' 235 JTS, C/O 30' SAND, POOH TO 230 JT 7223.15', LAND TBG, ND BOP'S, NUWH, DROP BALL, PUMP OPEN SLIDING SLEEVE 1250#, TEST FLOW LINE TO 3000#, RDMO
PLUG# 1 5728' 10' SAND 11 MIN 0# KICK PLUG# 2 5844' 30' SAND 8 MIN 0# KICK PLUG# 3 6366' 25' SAND 8 MIN 0# KICK PLUG# 4 6653' 40' SAND 8 MIN 0# KICK PLUG# 5 6951' 30' SAND 9 MIN 0# KICK PLUG# 6 7175' 25' SAND 10 MIN 0# KICK								
ISO PLUG 7451' BTM PERF 7421'								
TBG 150 JTS J-55 4707.03' BTM TBG 77 JTS L-80 2413.50' TOP KB 25.00' HANGER 4.125" .83' SN 1.875" 4.40' EOT 7223.15' NOTE: SHORT JT @ 2439.33'-2445.33'								
FRAC WTR 6,350 BBLs RCVD 1,500 BBLs LTR 4,850 BBLs								
	17:00 - 17:00	0.00	DRLOUT	50				WELL TURNED TO SALES @ 1400 HR ON 8/22/2013. 0 MCFD, 0 BWPD, FCP 400#, FTP 10#, 20/64" CK.
9/3/2013	7:00 - 7:30	0.50	DRLOUT	48		P		MIRU
	7:30 - 17:00	9.50	DRLOUT	44	C	P		MIRU, CSG 2000#, TBG 400#, BLOW DWN WELL, KILL WELL WITH T-MAC, NDWH, NU BOP'S, TEST BOP'S, 3000#, POOH STD BACK TBG, LAY DWN SLIDING SLEEVE ASSY, PU BIT, POBS, SN, TIH 176 JTS, 5507', EOT 5507' SWIFN
9/4/2013	7:00 - 7:30	0.50		48		P		WORK WITH FOAM UNIT

## US ROCKIES REGION

## Operation Summary Report

Well: NBU 921-2504BS BLUE			Spud Conductor: 1/4/2011			Spud Date: 1/13/2011			
Project: UTAH-UINTAH			Site: NBU 921-25N PAD				Rig Name No: SWABBCO 6/6		
Event: RECOMPL/RESEREVEADD			Start Date: 7/25/2013				End Date: 9/4/2013		
Active Datum: RKB @4,980.00usft (above Mean Sea Level)			UWI: SE/SW/0/9/S/21/E/25/0/0/26/PM/S/1156/W/0/2595/0/0						
Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation	
	7:30 - 17:00	9.50		44	D	P		TIH TO ISO CBP, MILL CBP @ 7451', C/O TO PBTD @ 9627', CIRC CLEAN HOLE, TOH LAY DOWN 22 JTS LAND TBG WITH 283 JTS, 8927.59' , POBS,1400#, TURN TO PROD, RDMO TO NBU 921-25N3AS TO MILL ISO CBP  TBG 150 JTS J-55 4707.03' BTM TBG 133 JTS L-80 4186.53' TOP KB 25.00' HANGER 4.125" .83' SN 1.875" 2.20' EOT 8927.59' NOTE: SHORT JT @ 4180.56'-4186.56'	

## US ROCKIES REGION

## 1 General

## 1.1 Customer Information

Company	US ROCKIES REGION
Representative	
Address	

## 1.2 Well/Wellbore Information

Well	NBU 921-25O4BS BLUE	Wellbore No.	OH
Well Name	NBU 921-25O4BS	Wellbore Name	NBU 921-25O4BS
Report No.	1	Report Date	8/19/2013
Project	UTAH-JUNTAH	Site	NBU 921-25N PAD
Rig Name/No.		Event	RECOMPL/RESERVEADD
Start Date	7/25/2013	End Date	9/4/2013
Spud Date	1/13/2011	Active Datum	RKB @4,980.00usft (above Mean Sea Level)
UWI	SE/SW/O/9/S/21/E/25/O/26/PM/S/1156/W/O/2595/O/O		

## 1.3 General

Contractor		Job Method		Supervisor	
Perforated Assembly		Conveyed Method			

## 1.4 Initial Conditions

Fluid Type		Fluid Density	
Surface Press		Estimate Res Press	
TVD Fluid Top		Fluid Head	
Hydrostatic Press		Press Difference	
Balance Cond	NEUTRAL		

## 1.5 Summary

Gross Interval	5,783.0 (usft)-7,421.0 (usft)	Start Date/Time	8/19/2013 12:00AM
No. of Intervals	28	End Date/Time	8/19/2013 12:00AM
Total Shots	120	Net Perforation Interval	35.00 (usft)
Avg Shot Density	3.43 (shot/ft)	Final Surface Pressure	
		Final Press Date	

## 2 Intervals

## 2.1 Perforated Interval

Date	Formation/ Reservoir	CCL@ (usft)	CCL-T S (usft)	MD Top (usft)	MD Base (usft)	Shot Density (shot/ft)	Misfires/ Add. Shot	Diameter (in)	Carr Type /Stage No	Carr Size (in)	Phasing (°)	Charge Desc /Charge Manufacturer	Charge Weight (gram)	Reason	Misrun
8/19/2013 12:00AM	WASATCH/			5,783.0	5,785.0	4.00		0.360	EXP/	3.375	90.00		23.00	PRODUCTIO N	



## US ROCKIES REGION

## 2.1 Perforated Interval (Continued)

Date	Formation/ Reservoir	CCL@ (usft)	CCL-T S (usft)	MD Top (usft)	MD Base (usft)	Shot Density (shot/ft)	Misfires/ Add. Shot	Diameter (in)	Carr Type /Stage No	Carr Size (in)	Phasing (°)	Charge Desc./Charge Manufacturer	Charge Weight (gram)	Reason	Misrun
8/19/2013 12:00AM	WASATCH/			5,804.0	5,807.0	4.00		0.360	EXP/	3.375	90.00		23.00	PRODUCTIO	N
8/19/2013 12:00AM	WASATCH/			6,096.0	6,097.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO	N
8/19/2013 12:00AM	WASATCH/			6,225.0	6,226.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO	N
8/19/2013 12:00AM	WASATCH/			6,283.0	6,284.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO	N
8/19/2013 12:00AM	WASATCH/			6,310.0	6,312.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO	N
8/19/2013 12:00AM	WASATCH/			6,334.0	6,336.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO	N
8/19/2013 12:00AM	WASATCH/			6,534.0	6,535.0	4.00		0.360	EXP/	3.375	90.00		23.00	PRODUCTIO	N
8/19/2013 12:00AM	WASATCH/			6,579.0	6,580.0	4.00		0.360	EXP/	3.375	90.00		23.00	PRODUCTIO	N
8/19/2013 12:00AM	WASATCH/			6,594.0	6,595.0	4.00		0.360	EXP/	3.375	90.00		23.00	PRODUCTIO	N
8/19/2013 12:00AM	WASATCH/			6,612.0	6,613.0	4.00		0.360	EXP/	3.375	90.00		23.00	PRODUCTIO	N
8/19/2013 12:00AM	WASATCH/			6,622.0	6,623.0	4.00		0.360	EXP/	3.375	90.00		23.00	PRODUCTIO	N
8/19/2013 12:00AM	WASATCH/			6,783.0	6,784.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO	N
8/19/2013 12:00AM	WASATCH/			6,815.0	6,816.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO	N
8/19/2013 12:00AM	WASATCH/			6,827.0	6,828.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO	N
8/19/2013 12:00AM	WASATCH/			6,862.0	6,863.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO	N
8/19/2013 12:00AM	WASATCH/			6,902.0	6,903.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO	N
8/19/2013 12:00AM	WASATCH/			6,920.0	6,921.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO	N
8/19/2013 12:00AM	WASATCH/			7,005.0	7,006.0	4.00		0.360	EXP/	3.375	90.00		23.00	PRODUCTIO	N
8/19/2013 12:00AM	WASATCH/			7,050.0	7,051.0	4.00		0.360	EXP/	3.375	90.00		23.00	PRODUCTIO	N
8/19/2013 12:00AM	WASATCH/			7,088.0	7,089.0	4.00		0.360	EXP/	3.375	90.00		23.00	PRODUCTIO	N
8/19/2013 12:00AM	WASATCH/			7,143.0	7,145.0	4.00		0.360	EXP/	3.375	90.00		23.00	PRODUCTIO	N



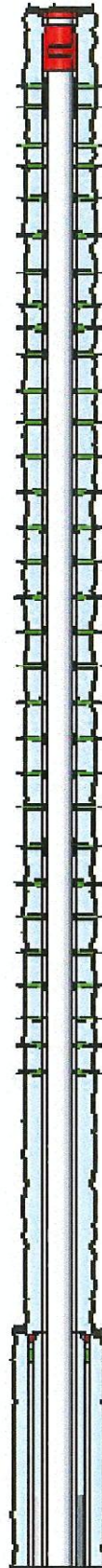
## US ROCKIES REGION

## 2.1 Perforated Interval (Continued)

Date	Formation/ Reservoir	CCL@ (usft)	CCL-T S (usft)	MD Top (usft)	MD Base (usft)	Shot Density (shot/ft)	Misfires/ Add. Shot	Diamete r (in)	Carr Type /Stage No	Carr Size (in)	Phasing (°)	Charge Desc /Charge Manufacturer	Charge Weight (gram)	Reason	Misrun
8/19/2013 12:00AM	WASATCH/			7,206.0	7,207.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO	N
8/19/2013 12:00AM	WASATCH/			7,222.0	7,223.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO	N
8/19/2013 12:00AM	WASATCH/			7,273.0	7,274.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO	N
8/19/2013 12:00AM	WASATCH/			7,368.0	7,369.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO	N
8/19/2013 12:00AM	WASATCH/			7,383.0	7,384.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO	N
8/19/2013 12:00AM	WASATCH/			7,419.0	7,421.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO	N

## 3 Plots

## 3.1 Wellbore Schematic



BLM - Vernal Field Office - Notification Form

Operator KERR MCGEE Rig Name/# H&P 311  
Submitted By PAT CAIN Phone Number 435- 790-1884  
Well Name/Number NBU 921-2504BS  
Qtr/Qtr SE/SW Section 25 Township 9S Range 21E  
Lease Serial Number UO 4139 ST  
API Number 43-047-51264

Spud Notice – Spud is the initial spudding of the well, not drilling out below a casing string.

Date/Time \_\_\_\_\_ AM ☐ PM ☐

Casing – Please report time casing run starts, not cementing times.

- ☐ Surface Casing
- ☐ Intermediate Casing
- ☒ Production Casing
- ☐ Liner
- ☐ Other

RECEIVED

FEB 14 2011

DIV. OF OIL, GAS & MINING

Date/Time 2/14/11 03:00 AM ☐ PM ☒

BOPE

- ☐ Initial BOPE test at surface casing point
- ☐ BOPE test at intermediate casing point
- ☐ 30 day BOPE test
- ☐ Other

Date/Time \_\_\_\_\_ AM ☐ PM ☐

Remarks \_\_\_\_\_  
\_\_\_\_\_